



ADEQ Inventory No.	100617	Permit No.	AZ0024791
LTF No.	98201	Place ID No.	XXXX

AUTHORIZATION TO DISCHARGE UNDER THE ARIZONA POLLUTANT DISCHARGE ELIMINATION SYSTEM

In compliance with the provisions of Arizona Revised Statutes (A.R.S.) Title 49, Chapter 2, Article 3.1; the Federal Water Pollution Control Act, (33 U.S.C. §1251 *et seq.*, as amended), and Arizona Administrative Code (A.A.C.) Title 18, Chapter 9, Articles 9 and 10, and amendments thereto the,

Salt River Project Agricultural Improvement and Power District (SRP)
Kyrene Generating Station (KGS)
P.O. Box 52025, Mailstop KYS100
Phoenix, AZ 85072

is authorized to discharge cooling tower blowdown, low volume wastewater, and stormwater from the KGS located at 7005 S. Kyrene Road, Tempe in Maricopa County, Arizona to the Salt River (via the City of Tempe Storm Drain), and the Gila Drain (via the Kyrene Branch Lateral), and the Western Canal (Phoenix Area Canals below municipal water treatment plant intakes), all protected surface waters in Arizona that are Waters of the U.S. (WOTUS) in the Middle Gila River Basin at:

Outfall No.	Latitude	Longitude	Legal
001- Salt River	33° 21' 45" N	111° 56' 35" W	Township 1 S, Range 4 E, Section 10
002 – Gila Drain	33° 19' 06" N	111° 56' 01" W	Township 1 S, Range 4 E, Section 10
003 – Gila Drain via Kyrene Branch Lateral	33° 21' 33" N	111° 56' 17" W	Township 1 S, Range 4 E, Section 10
007 – Western Canal	33° 21' 24" N	111° 56' 7" W	Township 1 S, Range 4 E, Section 10
012 – Western Canal	33° 21' 24" N	111° 56' 7" W	Township 1 S, Range 4 E, Section 10

in accordance with effluent limitations, monitoring requirements and other conditions set forth herein, and in the attached "Standard AZPDES Permit Conditions."

Annual Registration Fee [A.R.S. 49-255.01 and A.A.C. R18-14-104] The annual registration fee for this permit is payable to ADEQ each year. For the purposes of the annual fees, this permit is a Major permit. If the facility is not yet constructed or is incapable of discharge at this time, the permittee may be eligible for reduced fees under rule. Send all correspondence requesting reduced fees to the Water Quality Division of ADEQ. Please reference the permit number, LTF number and why reduced fees are requested under rule.

This permit shall become effective on _____.

This permit and the authorization to discharge shall expire on _____.

Signed _____.

Trevor Baggione, Director
Water Quality Division
Arizona Department of Environmental Quality

DRAFT

Table of Contents

PART I. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS.....	4
A. Effluent Limitations and Monitoring Requirements	4
B. Trace Substance Monitoring	9
C. Whole Effluent Toxicity Monitoring	10
D. Effluent Characterization Testing	10
E. Surface Water Quality Standards	17
PART II. MONITORING AND REPORTING	17
A. Sample Collection and Analysis	17
B. Reporting of Monitoring Results	19
C. Twenty-four Hour Reporting of Noncompliance	21
PART III. WHOLE EFFLUENT TOXICITY TESTING REQUIREMENTS	22
A. General Conditions.....	22
B. Chronic Toxicity	22
C. Quality Assurance.....	23
D. Toxicity Identification Evaluation (TIE)/Toxicity Reduction Evaluation (TRE) Process	24
E. WET Reporting.....	25
PART IV. SPECIAL CONDITIONS	25
A. Stormwater Requirements	25
B. Chemical Additives:.....	37
C. Reopener	38
Appendix A. Part A: Acronyms.....	39
Appendix A. Part B: Definitions	39
Appendix B. AZPDES Discharge Flow Record	46
Appendix C. Ammonia Data Log	52
Appendix D. Standard AZPDES Permit Conditions & Notifications	55

PART I. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

A. Effluent Limitations and Monitoring Requirements

1. The Permittee shall limit and monitor discharges from Outfalls 001, 002, 003, 007, and 012 as specified in Table 1.a. through 1.e. which follow.
2. There shall be no discharge of polychlorinated biphenyl compounds such as those commonly used for transformer fluid.
3. Neither free available chlorine nor total residual chlorine may be discharged from any unit for more than two hours in any one day and not more than one unit in any plant may discharge free available or total residual chlorine at any one time.
4. The discharge from cooling towers shall be free from the 126 priority pollutants (except for chromium and zinc) which may be contained in chemicals added for cooling tower maintenance. The list of priority pollutants is provided in Appendix A to Part 423 of 40 CFR which is incorporated by reference in A.A.C. R18-9-A905 (A)(9).
5. The permittee is authorized to discharge stormwater associated with industrial activity (as defined in Arizona Administrative Code, R18-9-A902(B)(8)(a)), to waters on the protected surface water list, which includes waters of the U.S. (WOTUS) and non-WOTUS protected surface waters, either directly or by means of a conveyance from Outfall 003. Discharges from Outfall 003 shall not be comingled with cooling tower blowdown, low volume wastewaters, or other non-stormwater discharges. See additional Stormwater Requirements in Part IV.A. of this permit.

Table 1.a. Outfall 001

Effluent Limitations and Monitoring Requirements – Cooling tower blowdown and low volume wastewater

Parameter (3)	Maximum Allowable Discharge Limitations		Monitoring Requirement (1)(2)	
	Concentration Limits			
	Monthly Average	Daily Maximum	Monitoring Frequency	Sample Type (4)
Discharge Flow (MGD) (5)	REPORT	REPORT	Continuous	Metered
Chlorine, Total Residual (TRC) (6)(7)	9 µg/L	18 µg/L	1x / Month	Discrete
Chlorine, free available (FAC) (6)(7)	0.2 mg/L	0.5 mg/L	1x / Month	Discrete
Total Suspended Solids (TSS)	30 mg/L	100 mg/L	1x / Month	Discrete
Oil and Grease	15 mg/L	20 mg/L	1x / Month	Discrete
Chromium VI (8)	8.1 µg/L	16 µg/L	1x / Quarter	Discrete
Selenium	2 µg/L	3 µg/L	1x / Quarter	Discrete
Hardness (CaCO ₃)	REPORT	REPORT	1x / Quarter	Discrete
pH (6)	Not less than 6.5 standard units (S.U.) nor greater than 9.0 S.U.		1x/week	Discrete

Footnotes

- 1 Testing must coincide with the Whole Effluent Toxicity Test (WET) samples, if any, taken during that monitoring period as per Part I.C, Table 3 of the permit. See Part III of the permit.
- 2 If discharge is infrequent, see Part I.D for minimum effluent characterization monitoring requirements.

- 3 All metal analyses shall be for total recoverable metals, except for chromium VI which is dissolved.
- 4 For the purpose of this permit, a "discrete" sample means an individual sample of at least 100 ml collected from a single location, or over a period of time not exceeding 15 minutes.
- 5 Monitoring and reporting required. No limit set at this time. In addition to the average and maximum flows reported on the Discharge Monitoring Report forms, daily discharge flow shall be recorded on the Discharge Flow Record provided in Appendix B. See Part II.B. for reporting requirements.
- 6 TRC, FAC, and pH must be measured at the time of sampling and do not require use of a certified laboratory. Measurements must be obtained in accordance with the applicable method and must meet all method quality assurance/quality control requirements to be considered valid data.
- 7 Total residual chlorine and free available chlorine shall be monitored within the first hour of discharge after each chlorination event. See Part II.A.6 for specific monitoring requirements for chlorine.
- 8 If total chromium exceeds 8 µg/L, the permittee must conduct sampling for chromium VI for the remainder of the permit. Otherwise, monitoring for chromium VI is not required.
- 9 Limits are based on the maximum hardness of 400 mg/L as CaCO₃. The discharge must be tested for hardness at the same time that these metals samples are taken. See the hardness definition in Appendix A, Part B.

Table 1.b Outfall 002

Effluent Limitations and Monitoring Requirements – Cooling tower blowdown and low volume wastewater

Parameter (2)	Maximum Allowable Discharge Limitations		Monitoring Requirement (1)	
	Concentration Limits			
	Monthly Average	Daily Maximum	Monitoring Frequency	Sample Type (3)
Discharge Flow (MGD)(4)	REPORT	REPORT	Continuous	Metered
Chlorine, free available (FAC) (5)(6)	0.2 mg/L	0.5 mg/L	1x / Month	Discrete
Total Suspended Solids (TSS)	30 mg/L	100 mg/L	1x / Month	Discrete
Oil and Grease	15 mg/L	20 mg/L	1x / Month	Discrete
Boron	1000 µg/L	1200 µg/L	1x / Quarter	Discrete
Chromium, Total	0.2 mg/L	0.2 mg/L	1x / Quarter	Discrete
Zinc	1.0 mg/L	1.0 mg/L	1x / Quarter	Discrete
pH (5)	Not less than 6.5 standard units (S.U.) nor greater than 9.0 S.U.		1x/week	Discrete

Footnotes

- 1 If discharge is infrequent, see Part I.D for minimum effluent characterization monitoring requirements.
- 2 All metal analyses shall be for total recoverable metals.
- 3 For the purpose of this permit, a "discrete" sample means an individual sample of at least 100 ml collected from a single location, or over a period of time not exceeding 15 minutes.
- 4 Monitoring and reporting required. No limit set at this time. In addition to the average and maximum flows reported on the Discharge Monitoring Report forms, daily discharge flow shall be recorded on the Discharge Flow Record provided in Appendix B. See Part II.B. for reporting requirements.
- 5 TRC, FAC, and pH must be measured at the time of sampling and do not require use of a certified laboratory. Measurements must be obtained in accordance with the applicable method and must meet all method quality assurance/quality control requirements to be considered valid data.
- 6 Total residual chlorine and free available chlorine shall be monitored within the first hour of discharge after each chlorination event. See Part II.A.7 for specific monitoring requirements for chlorine.

Table 1.c Outfall 003

Effluent Limitations and Monitoring Requirements - Stormwater

Parameter (3)	Maximum Allowable Discharge Limitations		Monitoring Requirement (1)	
	Action Levels			
	Monthly Average	Daily Maximum	Monitoring Frequency	Sample Type (4)
Discharge Flow (MGD) (2)	Report (2)	Report	1x / Discharge Event	Estimated
Oil and Grease (2)	Report (2)	Report	1x / Discharge Event	Discrete
Iron (6)	---	1.0 mg/L	1x / Discharge Event	Discrete
Total suspended solids (2)	Report (2)	Report	1x / Discharge Event	Discrete
pH (5)	Not less than 6.5 standard units (S.U.) nor greater than 9.0 S.U.		1x / Discharge Event	Discrete

Footnotes

- Monitoring must be performed on a storm event that results in a discharge from a site that follows the preceding "measurable storm event" by at least 72 hours (3 calendar days).
- Monitoring and reporting required. No limit set at this time.
- All metal analyses shall be for total recoverable metals.
- For the purpose of this permit, a "discrete" sample means an individual sample of at least 100 ml collected from a single location, or over a period of time not exceeding 15 minutes.
- pH must be measured at the time of sampling and do not require use of a certified laboratory. Measurements must be obtained in accordance with the applicable method and must meet all method quality assurance/quality control requirements to be considered valid data.
- Exceedance of an action level requires an assessment of stormwater control measures. See Part IV.8 of the Permit.

Table 1.d Outfall 007

Effluent Limitations and Monitoring Requirements – Groundwater discharges (well water)

Parameter (2)	Maximum Allowable Discharge Limitations		Monitoring Requirement (1)	
	Concentration Limits			
	Monthly Average	Daily Maximum	Monitoring Frequency	Sample Type (3)
Discharge Flow (MGD)(4)	Report	Report	1x / Day	Estimated
Boron	1000 mg/L	1800 mg/L	1x / Quarter	Discrete
pH (5)	Not less than 6.5 standard units (S.U.) nor greater than 9.0 S.U.		1x / Month	Discrete

Footnotes

- 1 If discharge is infrequent, see Part I.D for minimum effluent characterization monitoring requirements
- 2 All metal analyses shall be for total recoverable metals.
- 3 For the purpose of this permit, a "discrete" sample means an individual sample of at least 100 ml collected from a single location, or over a period of time not exceeding 15 minutes.
- 4 Monitoring and reporting required. No limit set at this time. In addition to the average and maximum flows reported on the Discharge Monitoring Report forms, daily discharge flow shall be recorded on the Discharge Flow Record provided in Appendix B. See Part II.B. for reporting requirements.
- 5 pH must be measured at the time of sampling and do not require use of a certified laboratory. Measurements must be obtained in accordance with the applicable method and must meet all method quality assurance/quality control requirements to be considered valid data.

Table 1.e Outfall 012

Effluent Limitations and Monitoring Requirements – Low volume wastewater and stormwater

Parameter (2)	Maximum Allowable Discharge Limitations		Monitoring Requirement (1)	
	Concentration Limits			
	Monthly Average	Daily Maximum	Monitoring Frequency	Sample Type (3)
Discharge Flow (MGD) (4)	Report (4)	Report	1x / Day	Estimated
Oil and Grease	15 mg/L	20 mg/L	1x / Month	Discrete
Lead	100 µg/L	200 µg/L	1x / Quarter	Discrete
Total suspended solids	30 mg/L	100 mg/L	1x / Month	Discrete
pH (5)	Not less than 6.5 standard units (S.U.) nor greater than 9.0 S.U.		1x / Discharge Event	Discrete

Footnotes

- 1 If discharge is infrequent, see Part I.D for minimum effluent characterization monitoring requirements
- 2 All metal analyses shall be for total recoverable metals.
- 3 For the purpose of this permit, a "discrete" sample means an individual sample of at least 100 ml collected from a single location, or over a period of time not exceeding 15 minutes.
- 4 Monitoring and reporting required. No limit set at this time. In addition to the average and maximum flows reported on the Discharge Monitoring Report forms, daily discharge flow shall be recorded on the Discharge Flow Record provided in Appendix B. See Part II.B. for reporting requirements.
- 5 pH must be measured at the time of sampling and do not require use of a certified laboratory. Measurements must be obtained in accordance with the applicable method and must meet all method quality assurance/quality control requirements to be considered valid data.

B. Trace Substance Monitoring

- The permittee shall monitor discharges from Outfall 001, and 007, as specified in Table 2.a. – 2.d. below. Monitoring results above the Assessment Levels (ALs) listed below do not constitute a permit violation, but may trigger evaluation of Reasonable Potential (RP) by ADEQ. The permittee shall use an approved analytical method with a Limit of Quantitation (LOQ) lower than the AL values as described in Part II.A.5.

Table 2.a Outfall 001 - Assessment Level Monitoring

Parameter (2)	Assessment Levels (1)		Monitoring Requirements (2) (3)	
	Monthly Average	Daily Maximum	Monitoring Frequency	Sample Type
Hydrogen sulfide (4)	2 µg/L	3 µg/L	1x/Quarter	Discrete
Sulfides (4)	Report [µg/L]	Report [µg/L]	1x/Month	Discrete
Benzo(a)Anthracene	0.2 µg/L	0.4 µg/L	1x / Year	Discrete
Benzo(a)Pyrene	0.2 µg/L	0.4 µg/L	1x / Year	Discrete
Benzo(b)Fluoranthene	1.9 µg/L	3.8 µg/L	1x / Year	Discrete
Chrysene	19 µg/L	38 µg/L	1x / Year	Discrete
Dibenzo(a,h)anthracene	1.9 µg/L	3.8 µg/L	1x / Year	Discrete
Indeno (1,2,3-cd) Pyrene	1.9 µg/L	3.8 µg/L	1x / Year	Discrete
N-Nitrosodimethylamine	0.03 µg/L	0.06 µg/L	1x / Year	Discrete
N-Nitrosodi-n-Phenylamine	164 µg/L	329 µg/L	1x / Year	Discrete
N-Nitrosodi-n-Propylamine	88667µg/L	177883 µg/L	1x / Year	Discrete
Phenanthrene	5 µg/L	10 µg/L	1x / Year	Discrete

Footnotes

- Concentration values are calculated based on Arizona Water Quality Standards. Monitoring and reporting required.
- Testing must coincide with the Whole Effluent Toxicity Test (WET) samples, if any, taken during that monitoring period as per Part I.C., Table 3 of the permit. See Part IV of the permit.
- If discharge is infrequent see Part I.D for minimum effluent characterization monitoring requirements.
- With a detection limit no higher than 100 µg/L, any detection of sulfides shall trigger monitoring for hydrogen sulfide for the remainder of the permit term. Monitoring for hydrogen sulfide is only required if sulfide is detected.

Table 2.b Outfall 007 - Assessment Level Monitoring

Parameter	Assessment Levels (1)		Monitoring Requirements (2)	
	Monthly Average	Daily Maximum	Monitoring Frequency	Sample Type
Arsenic	200 µg/L	400 µg/L	1x / Year	Discrete
Boron	1000 µg/L	1800 µg/L	1x / Year	Discrete
Cadmium	50 µg/L	100 µg/L	1x / Year	Discrete
Chromium, Total	1000 µg/L	1700 µg/L	1x / Year	Discrete
Copper	500 µg/L	1000 µg/L	1x / Year	Discrete
Cyanide	200 µg/L	400 µg/L	1x / Year	Discrete
Lead	100 µg/L	200 µg/L	1x / Year	Discrete
Mercury	10 µg/L	20 µg/L	1x / Year	Discrete

Selenium	20 µg/L	40 µg/L	1x / Year	Discrete
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Footnotes

- 1 Concentration values are calculated based on Arizona Water Quality Standards. Monitoring and reporting required.
- 2 If discharge is infrequent see Part I.D for minimum effluent characterization monitoring requirements.

C. Whole Effluent Toxicity Monitoring

1. The permittee shall monitor discharges from Outfall 001 for Whole Effluent Toxicity (WET) as specified in Table 3 which follows. If toxicity is detected above an Action Level specified as follows, the permittee must perform follow-up testing and, as applicable, follow the TIE/TRE processes in Part III.D of the permit.

Table 3. Outfall 001 - WET Testing

Effluent Characteristic (1)	Action Levels		Monitoring Requirements	
	Daily Maximum (2) (3)	Monthly Median (3)	Monitoring Frequency (4)	Sample Type
Chronic Toxicity <i>Pseudokirchneriella subcapitata</i> (Green algae) (5)	1.6 TUc	1.0 TUc	1x / Year	Discrete
Chronic Toxicity <i>Pimephales promelas</i> (Fathead minnow)	1.6 TUc	1.0 TUc	1x / Year	Discrete
Chronic Toxicity <i>Ceriodaphnia dubia</i> (Water flea)	1.6 TUc	1.0 TUc	1x / Year	Discrete

Footnotes

- 1 See Part III for additional requirements for testing and reporting Whole Effluent Toxicity (WET).
- 2 Since completion of one chronic WET test takes more than 24 hours, the daily maximum is considered to be the highest allowable test result.
- 3 If chronic toxicity is detected above the Action Levels in this table or an acute test fails, the permittee must perform follow-up testing. See Part III for details.
- 4 If discharge is infrequent see Part I.D for minimum effluent characterization monitoring requirements.
- 5 Formerly known as *Selenastrum capricornutum* or *Raphidocelis subcapitata*.

D. Effluent Characterization Testing

1. The permittee shall monitor to characterize the facility's effluent for Outfalls 001 and 002 for the parameters listed in Tables 4.a, 4.c.– 4.f. whether the facility is discharging or not. Samples from Outfall 001 and 002 are interchangeable since the wastewater is the same. When the facility discharges, monitoring is to be conducted at the frequency indicated in Tables 1 through 3. No limits or ALs are established, but the LOQ must be low enough to allow comparison of the results to the applicable water quality standards (WQS). If a LOQ below the WQS cannot be achieved, then the permittee shall use the method expected to achieve the lowest LOQ, as defined in Appendix A of this permit. Samples are to be representative of any seasonal variation in the discharge.
2. The permittee shall monitor to characterize the facility's effluent for Outfalls 007 and 012 for the parameters listed in Tables 4.a. – 4.b. No limits or ALs are established, but the LOQ must be low enough to allow comparison of the results to the applicable water quality standards (WQS). If a LOQ below the WQS cannot be achieved, then the permittee shall use the method expected to achieve the lowest LOQ, as defined in Appendix A of this permit. Samples are to be representative of any seasonal variation in the discharge.

Table 4.a. Outfalls 001, 002, 007, 012 — Effluent Characterization Testing—General Chemistry and Microbiology

Parameter	Reporting Units	Monitoring Requirements	
		Monitoring Frequency (1)	Sample Type
Ammonia (as N) (2)	mg/L	1x/year in years 2025, 2026, 2027 of permit term	Discrete
Biochemical Oxygen Demand (BOD-5)	mg/L	1x/year in years 2025, 2026, 2027 of permit term	Discrete
Chemical Oxygen Demand (COD)	mg/L	1x/year in years 2025, 2026, 2027 of permit term	Discrete
Chlorine, Total Residual (TRC) (4)(5)	µg/L	1x/year in years 2025, 2026, 2027 of permit term	Discrete
Chlorine, Free Available (FAC)	µg/L	1x/year in years 2025, 2026, 2027 of permit term	Discrete
Dissolved Oxygen (5)	mg/L	1x/year in years 2025, 2026, 2027 of permit term	Discrete
<i>E. coli</i>	cfu/100 mL (3)	1x/year in years 2025, 2026, 2027 of permit term	Discrete
Nitrate/Nitrite (as N)	mg/L	1x/year in years 2025, 2026, 2027 of permit term	Discrete
Nitrogen, Total Kjeldahl (TKN)	mg/L	1x/year in years 2025, 2026, 2027 of permit term	Discrete
Oil and Grease	mg/L	1x/year in years 2025, 2026, 2027 of permit term	Discrete
pH (5)	S.U.	1x/year in years 2025, 2026, 2027 of permit term	Discrete
Temperature (5)	°Celsius	1x/year in years 2025, 2026, 2027 of permit term	Discrete
Total Organic Carbon (TOC)	mg/L	1x/year in years 2025, 2026, 2027 of permit term	Discrete
Total Dissolved Solids (TDS)	mg/L	1x/year in years 2025, 2026, 2027 of permit term	Discrete
Total Suspended Solids (TSS)	mg/L	1x/year in years 2025, 2026, 2027 of permit term	Discrete

Footnotes

- 1 If more frequent monitoring of any of these parameters is required by another part of this permit, those sampling results may be used to satisfy Table 4.a. requirements.
- 2 When sampling for ammonia for Outfall 001 temperature and pH must be determined concurrently and the results recorded on the **Ammonia Data Log** provided in Appendix C. See Part II.B for reporting requirements.
- 3 cfu = colony forming units; “most probable number” (mpn) is considered equivalent for reporting purposes.
- 4 Total residual chlorine and free available chlorine shall be monitored within the first hour of discharge after each chlorination event. See Part II.A.6 for specific monitoring requirements for chlorine.
- 5 Temperature, pH, TRC and dissolved oxygen must be measured at the time of sampling and do not require use of a certified laboratory. See Part II.A.6 for methods of analyses for chlorine. Measurements must be obtained in accordance with the applicable method and must meet all method quality assurance/quality control requirements to be considered valid data.

Table 4.b Outfall 007 and 012 — Effluent Characterization Testing—Selected Metals, Trace Substances

Parameter (1)	Reporting Units	Monitoring Requirements	
		Monitoring Frequency (2)	Sample Type
Arsenic	µg/L	1x/year in years 2025, 2026, 2027 of permit term	Discrete
Boron	µg/L	1x/year in years 2025, 2026, 2027 of permit term	Discrete
Cadmium	µg/L	1x/year in years 2025, 2026, 2027 of permit term	Discrete
Chromium	µg/L	1x/year in years 2025, 2026, 2027 of permit term	Discrete
Copper	µg/L	1x/year in years 2025, 2026, 2027 of permit term	Discrete
Iron	µg/L	1x/year in years 2025, 2026, 2027 of permit term	Discrete
Lead	µg/L	1x/year in years 2025, 2026, 2027 of permit term	Discrete
Mercury	µg/L	1x/year in years 2025, 2026, 2027 of permit term	Discrete
Selenium	µg/L	1x/year in years 2025, 2026, 2027 of permit term	Discrete
Zinc	µg/L	1x/year in years 2025, 2026, 2027 of permit term	Discrete
Cyanide (as free cyanide)	µg/L	1x/year in years 2025, 2026, 2027 of permit term	Discrete

Footnotes

- 1 All metals analyses shall be for total recoverable metals.
- 2 If more frequent monitoring of any of these parameters is required by another part of this permit, those sampling results may be used to satisfy Table 4.b. requirements.

Table 4.c Outfall 001, 002 — Effluent Characterization Testing—Selected Metals, Trace Substances

Parameter (1)	Reporting Units	Monitoring Requirements	
		Monitoring Frequency (2)	Sample Type
Antimony	µg/L	1x/year in years 2025, 2026, 2027 of permit term	Discrete
Arsenic	µg/L	1x/year in years 2025, 2026, 2027 of permit term	Discrete
Boron	µg/L	1x/year in years 2025, 2026, 2027 of permit term	Discrete
Beryllium	µg/L	1x/year in years 2025, 2026, 2027 of permit term	Discrete
Cadmium	µg/L	1x/year in years 2025, 2026, 2027 of permit term	Discrete
Chromium (4)	µg/L	1x/year in years 2025, 2026, 2027 of permit term	Discrete
Chromium VI (4)	µg/L	1x/year in years 2025, 2026, 2027 of permit term	Discrete
Copper	µg/L	1x/year in years 2025, 2026, 2027 of permit term	Discrete
Iron	µg/L	1x/year in years 2025, 2026, 2027 of permit term	Discrete
Lead	µg/L	1x/year in years 2025, 2026, 2027 of permit term	Discrete
Mercury	µg/L	1x/year in years 2025, 2026, 2027 of permit term	Discrete
Nickel	µg/L	1x/year in years 2025, 2026, 2027 of permit term	Discrete
Selenium	µg/L	1x/year in years 2025, 2026, 2027 of permit term	Discrete
Silver	µg/L	1x/year in years 2025, 2026, 2027 of permit term	Discrete
Thallium	µg/L	1x/year in years 2025, 2026, 2027 of permit term	Discrete
Zinc	µg/L	1x/year in years 2025, 2026, 2027 of permit term	Discrete
Hardness	mg/L	1x/year in years 2025, 2026, 2027 of permit term	Discrete
Whole Effluent Toxicity (all 3 species) (3)	TUc	1x/year in years 2025, 2026, 2027 of permit term	Discrete
Cyanide (as free cyanide)	µg/L	1x/year in years 2025, 2026, 2027 of permit term	Discrete

Footnotes

- 1 All metals analyses shall be for total recoverable metals, except chromium VI, which is dissolved.
- 2 If more frequent monitoring of any of these parameters is required by another part of this permit, those sampling results may be used to satisfy Table 4.c. requirements.
- 3 If chronic toxicity is detected above the Action Levels specified in Table 3 or an acute test fails, the permittee must perform follow-up testing and, as applicable, follow the TIE/TRE processes in Part IV.D of the permit, whether discharging or not. See Part IV for additional information on requirements for testing and reporting Whole Effluent Toxicity (WET).
- 4 If total chromium exceeds 8 µg/L, the permittee must conduct sampling for chromium VI for the remainder of the permit. Otherwise, monitoring for chromium VI is not required.

Table 4.d. Outfall 001 and 002 — Effluent Characterization Testing—Selected Volatile Organic Compounds and trace substances

Parameter	Reporting Units	Monitoring Requirements	
		Monitoring Frequency (1)	Sample Type
Hydrogen sulfide (2)	µg/L	1x/year in years 2025, 2026, 2027 of permit term	Discrete
Acrolein	µg/L	1x/year in years 2025, 2026, 2027 of permit term	Discrete
Acrylonitrile	µg/L	1x/year in years 2025, 2026, 2027 of permit term	Discrete

Parameter	Reporting Units	Monitoring Requirements	
		Monitoring Frequency (1)	Sample Type
Benzene	µg/L	1x/year in years 2025, 2026, 2027 of permit term	Discrete
Bromoform	µg/L	1x/year in years 2025, 2026, 2027 of permit term	Discrete
Carbon tetrachloride	µg/L	1x/year in years 2025, 2026, 2027 of permit term	Discrete
Chlorobenzene	µg/L	1x/year in years 2025, 2026, 2027 of permit term	Discrete
Chlorodibromomethane	µg/L	1x/year in years 2025, 2026, 2027 of permit term	Discrete
Chloroethane	µg/L	1x/year in years 2025, 2026, 2027 of permit term	Discrete
2-chloroethylvinyl ether	µg/L	1x/year in years 2025, 2026, 2027 of permit term	Discrete
Chloroform	µg/L	1x/year in years 2025, 2026, 2027 of permit term	Discrete
Dichlorobromomethane	µg/L	1x/year in years 2025, 2026, 2027 of permit term	Discrete
1,1-dichloroethane	µg/L	1x/year in years 2025, 2026, 2027 of permit term	Discrete
1,2-dichloroethane	µg/L	1x/year in years 2025, 2026, 2027 of permit term	Discrete
Trans-1,2-dichloroethylene	µg/L	1x/year in years 2025, 2026, 2027 of permit term	Discrete
1,1-dichloroethylene	µg/L	1x/year in years 2025, 2026, 2027 of permit term	Discrete
1,2-dichloropropane	µg/L	1x/year in years 2025, 2026, 2027 of permit term	Discrete
1,3-dichloropropylene	µg/L	1x/year in years 2025, 2026, 2027 of permit term	Discrete
Ethylbenzene	µg/L	1x/year in years 2025, 2026, 2027 of permit term	Discrete
Methyl bromide	µg/L	1x/year in years 2025, 2026, 2027 of permit term	Discrete
Methyl chloride	µg/L	1x/year in years 2025, 2026, 2027 of permit term	Discrete
Methylene chloride	µg/L	1x/year in years 2025, 2026, 2027 of permit term	Discrete
1,1,2,2-tetrachloroethane	µg/L	1x/year in years 2025, 2026, 2027 of permit term	Discrete
Tetrachloroethylene	µg/L	1x/year in years 2025, 2026, 2027 of permit term	Discrete
Toluene	µg/L	1x/year in years 2025, 2026, 2027 of permit term	Discrete
1,1,1-trichloroethane	µg/L	1x/year in years 2025, 2026, 2027 of permit term	Discrete
1,1,2-trichloroethane	µg/L	1x/year in years 2025, 2026, 2027 of permit term	Discrete
Trichloroethylene	µg/L	1x/year in years 2025, 2026, 2027 of permit term	Discrete
Vinyl chloride	µg/L	1x/year in years 2025, 2026, 2027 of permit term	Discrete

Footnotes

- 1 If more frequent monitoring of any of these parameters is required by another part of this permit, those sampling results may be used to satisfy Table 4.d. requirements.
- 2 The permittee may initially monitor for sulfide instead of hydrogen sulfide. The limit of quantification shall be no higher than 100 µg/L, and any detection of sulfides shall trigger monitoring for hydrogen sulfide for the remainder of the permit term.

Table 4.e. Outfall 001 and 002 — Effluent Characterization Testing—Selected Acid Extractable Compounds

Parameter	Reporting Units	Monitoring Requirements	
		Monitoring Frequency	Sample Type
P-chloro-m-cresol	µg/L	1x/year in years 2025, 2026, 2027 of permit term	Discrete
2-chlorophenol	µg/L	1x/year in years 2025, 2026, 2027 of permit term	Discrete
2,4-dichlorophenol	µg/L	1x/year in years 2025, 2026, 2027 of permit term	Discrete
2,4-dimethylphenol	µg/L	1x/year in years 2025, 2026, 2027 of permit term	Discrete
4,6-dinitro-o-cresol	µg/L	1x/year in years 2025, 2026, 2027 of permit term	Discrete
2,4-dinitrophenol	µg/L	1x/year in years 2025, 2026, 2027 of permit term	Discrete
2-nitrophenol	µg/L	1x/year in years 2025, 2026, 2027 of permit term	Discrete
4-nitrophenol	µg/L	1x/year in years 2025, 2026, 2027 of permit term	Discrete
Pentachlorophenol	µg/L	1x/year in years 2025, 2026, 2027 of permit term	Discrete
Phenol	µg/L	1x/year in years 2025, 2026, 2027 of permit term	Discrete
2,4,6- trichlorophenol	µg/L	1x/year in years 2025, 2026, 2027 of permit term	Discrete

Table 4.f. Outfall 001 and 002 — Effluent Characterization Testing—Selected Base Neutral Compounds

Parameter	Reporting Units	Monitoring Requirements	
		Monitoring Frequency (1)	Sample Type
Acenaphthene	µg/L	1x/year in years 2025,2026,2027 of permit term	Discrete
Acenaphthylene	µg/L	1x/year in years 2025,2026,2027 of permit term	Discrete
Anthracene	µg/L	1x/year in years 2025,2026,2027 of permit term	Discrete
Benidine	µg/L	1x/year in years 2025,2026,2027 of permit term	Discrete
Benzo(a)anthracene	µg/L	1x/year in years 2025,2026,2027 of permit term	Discrete
Benzo(a)pyrene	µg/L	1x/year in years 2025,2026,2027 of permit term	Discrete
3,4 benzofluoranthene	µg/L	1x/year in years 2025,2026,2027 of permit term	Discrete
Benzo(ghi)perylene	µg/L	1x/year in years 2025,2026,2027 of permit term	Discrete
Benzo(k)fluoranthene	µg/L	1x/year in years 2025,2026,2027 of permit term	Discrete
Bis (2-chloroethoxy) methane	µg/L	1x/year in years 2025,2026,2027 of permit term	Discrete
Bis (2-chloroethyl) ether	µg/L	1x/year in years 2025,2026,2027 of permit term	Discrete
Bis(2-chloroisopropyl) ether	µg/L	1x/year in years 2025,2026,2027 of permit term	Discrete
Bis (2-ethylhexyl) phthalate	µg/L	1x/year in years 2025,2026,2027 of permit term	Discrete
4-bromophenyl phenyl ether	µg/L	1x/year in years 2025,2026,2027 of permit term	Discrete
Butyl benzyl phthalate	µg/L	1x/year in years 2025,2026,2027 of permit term	Discrete
2-chloronaphthalene	µg/L	1x/year in years 2025,2026,2027 of permit term	Discrete
4-chlorophenyl phenyl ether	µg/L	1x/year in years 2025,2026,2027 of permit term	Discrete

Parameter	Reporting Units	Monitoring Requirements	
		Monitoring Frequency (1)	Sample Type
Chrysene	µg/L	1x/year in years 2025,2026,2027 of permit term	Discrete
Di-n-butyl phthalate	µg/L	1x/year in years 2025,2026,2027 of permit term	Discrete
Di-n-octyl phthalate	µg/L	1x/year in years 2025, 2026, 2027 of permit term	Discrete
Dibenzo(a,h)anthracene	µg/L	1x/year in years 2025, 2026, 2027 of permit term	Discrete
1,2-dichlorobenzene	µg/L	1x/year in years 2025, 2026, 2027 of permit term	Discrete
1,3-dichlorobenzene	µg/L	1x/year in years 2025, 2026, 2027 of permit term	Discrete
1,4-dichlorobenzene	µg/L	1x/year in years 2025, 2026, 2027 of permit term	Discrete
3,3-dichlorobenzidine	µg/L	1x/year in years 2025, 2026, 2027 of permit term	Discrete
Diethyl phthalate	µg/L	1x/year in years 2025, 2026, 2027 of permit term	Discrete
Dimethyl phthalate	µg/L	1x/year in years 2025, 2026, 2027 of permit term	Discrete
2,4-dinitrotoluene	µg/L	1x/year in years 2025, 2026, 2027 of permit term	Discrete
2,6-dinitrotoluene	µg/L	1x/year in years 2025, 2026, 2027 of permit term	Discrete
1,2-diphenylhydrazine	µg/L	1x/year in years 2025, 2026, 2027 of permit term	Discrete
Fluoranthene	µg/L	1x/year in years 2025, 2026, 2027 of permit term	Discrete
Fluorene	µg/L	1x/year in years 2025, 2026, 2027 of permit term	Discrete
Hexachlorobenzene	µg/L	1x/year in years 2025, 2026, 2027 of permit term	Discrete
Hexachlorobutadiene	µg/L	1x/year in years 2025, 2026, 2027 of permit term	Discrete
Hexachlorocyclopentadiene	µg/L	1x/year in years 2025, 2026, 2027 of permit term	Discrete
Hexachloroethane	µg/L	1x/year in years 2025, 2026, 2027 of permit term	Discrete
Indeno(1,2,3-cd)pyrene	µg/L	1x/year in years 2025, 2026, 2027 of permit term	Discrete
Isophorone	µg/L	1x/year in years 2025, 2026, 2027 of permit term	Discrete
Naphthalene	µg/L	1x/year in years 2025, 2026, 2027 of permit term	Discrete
Nitrobenzene	µg/L	1x/year in years 2025, 2026, 2027 of permit term	Discrete
N-nitrosodi-n-propylamine	µg/L	1x/year in years 2025, 2026, 2027 of permit term	Discrete
N-nitrosodimethylamine	µg/L	1x/year in years 2025, 2026, 2027 of permit term	Discrete
N-nitrosodiphenylamine	µg/L	1x/year in years 2025, 2026, 2027 of permit term	Discrete
Phenanthrene	µg/L	1x/year in years 2025, 2026, 2027 of permit term	Discrete
Pyrene	µg/L	1x/year in years 2025, 2026, 2027 of permit term	Discrete
Polychlorinated biphenyls (PCBs)	µg/L	1x/year in years 2025, 2026, 2027 of permit term	Discrete
1,2,4-trichlorobenzene	µg/L	1x/year in years 2025, 2026, 2027 of permit term	Discrete

Footnotes

- 1 If more frequent monitoring of any of these parameters is required by another part of this permit, those sampling results may be used to satisfy Table 4.f. requirements.

E. Surface Water Quality Standards

1. The discharge shall be free from pollutants in amounts or combinations that:
 - a. Settle to form bottom deposits that inhibit or prohibit the habitation, growth or propagation of aquatic life;
 - b. Cause objectionable odor in the area in which the surface water is located;
 - c. Cause off-flavor in aquatic organisms;
 - d. Are toxic to humans, animals, plants or other organisms;
 - e. Cause the growth of algae or aquatic plants that inhibit or prohibit the habitation, growth or propagation of other aquatic life or that impair recreational uses;
 - f. Change the color of the surface water from natural background levels or color.
2. The discharge shall be free from oil, grease and other pollutants that float as debris, foam, or scum; or that cause a film or iridescent appearance on the surface of the water; or that cause a deposit on a shoreline, bank or aquatic vegetation.
3. The discharge from Outfall 001 shall not cause an increase in the ambient water temperature of more than 3.0 degrees Celsius.
4. The discharge from Outfall 001 shall not cause the dissolved oxygen concentration in the receiving water to fall below 6 mg/L, unless the percent saturation of oxygen remains equal to or greater than 90%.
5. The discharge from Outfall 001 shall not cause the receiving water to exceed 80 mg/L for suspended sediment concentration.

PART II. MONITORING AND REPORTING

A. Sample Collection and Analysis

1. Samples taken for the monitoring requirements specified in Part I shall be collected at the following locations:
 - a. Outfall 001 and Outfall 002: Combined discharge samples shall be taken at a point downstream of the 50,000-gallon wastewater tank and prior to discharge to the City of Tempe Storm Drain or the Gila Drain, respectively.
 - b. Outfall 003: Stormwater samples shall be taken at a point downstream of the stormwater retention basin and prior to discharge into SRP Kyrene Branch Lateral.
 - c. Outfall 007: Discharge samples shall be taken at the Service Water Vault and prior to discharge to the Western Canal.
 - d. Outfall 012: Combined stormwater and low volume wastewater samples shall be at a point downstream of the accumulation vault and prior to discharge to the Western Canal.
2. The permittee is responsible for the quality and accuracy of all data required under this permit.
3. The permittee shall keep a QA Manual on site that describes the sample collection and analyses processes. If the permittee collects samples or conducts sample analyses in house, the permittee shall develop a QA Manual that addresses these activities. If a third party collects and/or analyzes samples on behalf of the permittee, the permittee shall obtain a copy of the applicable QA procedures. The QA Manual shall be available for review by ADEQ upon request. The QA Manual shall be updated as necessary to reflect current conditions, and shall describe the following:

- a. Project Management, including:
 - i. Purpose of sample collection and sample frequency;
 - ii. When and where samples will be collected;
 - iii. How samples will be collected;
 - iv. Laboratory(s) that will perform analyses;
 - v. Any field tests to be conducted (detail methods and specify equipment, including a description of any needed calibrations); and
 - vi. Pollutants or analytes being measured and for each, the permit-specific limits, Assessment Levels, or thresholds (e.g. the associated detection limits needed).
 - b. Sample collection procedures including:
 - i. Equipment to be used;
 - ii. Type and number of samples to be collected including QA/QC samples (i.e., background samples, duplicates, and equipment or field blanks);
 - iii. Types, sizes and number of sample bottles needed;
 - iv. Preservatives and holding times for the samples (see methods under 40 CFR 136 or 9 A.A.C. 14, Article 6 or any condition within this permit that specifies a particular test method);
 - v. Chain of Custody procedures.
 - c. Specify approved analytical method(s) to be used and include:
 - i. Limits of Detection (LOD) and Limits of Quantitation (LOQs);
 - ii. Required quality control (QC) results to be reported (e.g., matrix spike recoveries, duplicate relative percent differences, blank contamination, laboratory control sample recoveries, surrogate spike recoveries, etc.) and acceptance criteria; and
 - iii. Corrective actions to be taken by the permittee or the laboratory as a result of problems identified during QC checks.
 - d. How the permittee will perform data review; complete DMRs and records used to report results to ADEQ; resolve data quality issues; and identify limitations on the use of the data.
4. Sample collection, preservation and handling shall be performed as described in 40 CFR 136 including the referenced Edition of *Standard Methods for the Examination of Water and Wastewater*, or by procedures referenced in A.R.S. Title 9, Chapter 14 of the Arizona Department of Health Services (ADHS) Laboratory Licensure rules. The permittee shall outline the proper procedures in the QA Manual, and samples taken for this permit must conform to these procedures whether collection and handling is performed directly by the permittee or contracted to a third-party.
5. Analytical requirements
- a. The permittee shall use a laboratory licensed by the ADHS Office of Laboratory Licensure and Certification that has demonstrated proficiency within the last 12 months under A.A.C. R9-14-609, for each parameter to be sampled under this permit. However, this requirement does not apply to parameters which require analysis at the time of sample accordance with A.A.C. 36-495.02(A)(3). (These parameters may include flow, dissolved oxygen, pH, temperature, and total residual chlorine.)
 - b. The permittee must utilize analytical methods specified in this permit. If no test procedure is specified, the permittee shall analyze the pollutant using:
 - i. A test procedure listed in 40 CFR 136 which is also approved under A.A.C. R9-14-610 and is sufficiently sensitive in accordance with 40 CFR 136.1(c);
 - ii. An alternative test procedure approved by EPA as provided in 40 CFR 136 and which is also approved under A.A.C. R9-14-610;

- iii. A test procedure listed in 40 CFR 136, with modifications allowed by EPA or approved as a method alteration by ADHS under A.A.C. R9-14-610C; or
 - iv. If no test procedure for a pollutant is available under (5)(b)(i) through (5)(b)(iii) above, any Method approved under A.A.C. R9-14-610(B) for wastewater may be used, except the use of field kits is not allowed unless otherwise specified in this permit. If there is no approved wastewater method for a parameter, any other method identified in 9 A.A.C. 14, Article 6 that will achieve appropriate detection and reporting limits may be used for analyses.
 - c. For results to be considered valid, all analytical work, including those tests conducted by the permittee at the time of sampling (see Part II.A.4.a), shall meet quality control standards specified in the approved methods.
 - d. The permittee shall use analytical methods with a Limit of Quantitation (LOQ) that is lower than the effluent limitations, Assessments Levels, Action Levels, or other water quality criteria, if any, specified in this permit. If all methods have LOQs higher than the applicable water quality criteria, the Permittee shall use the approved analytical method with the lowest LOQ.
 - e. The permittee shall use a standard calibration curve when applicable to the method, where the lowest standard point is equal to or less than the LOQ.
6. Mercury Monitoring - The permittee shall use an ADHS-certified low-level mercury analytical method such as EPA method 245.7 or 1631E to achieve a reporting limit at or below the discharge limitations or assessment levels for mercury as specified in this permit. The permittee shall also use a "clean hands/dirty hands" sampling technique such as EPA Method 1669 if necessary to achieve these reporting limits.
7. Chlorine Monitoring - Because of the short holding time for chlorine, samples may be analyzed on-site using Hach Method No. 10014. Other methods are also acceptable for chlorine if the Method has a LOQ lower than discharge limits specified in this permit.
8. Metals Analyses - In accordance with 40 CFR 122.45(c), all effluent metals concentrations, with the exception of chromium VI, shall be measured as "total recoverable metals". Discharge Limits and Assessment Levels in this permit, if any, are for total metals, except for chromium VI for which the levels listed are dissolved.

B. Reporting of Monitoring Results

1. The permittee shall report monitoring results on Discharge Monitoring Report (DMR) to the ADEQ electronic submission portal myDEQ. The permittee shall submit results of all monitoring required by this permit in a format that will allow direct comparison with the limitations and requirements of this permit. If no discharge occurs during a reporting period, the permittee shall specify "No discharge" on the DMR. The results of all discharge analyses conducted during the monitoring period shall be included in determinations of the monthly average and daily maximums reported on the DMRs if the analyses were by methods specified in Part II.A above, as applicable.
2. DMRs and attachments are to be submitted by the 28th day of the month following the end of a monitoring period. For example, if the monitoring period ends January 31st, the permittee shall submit the DMR by February 28th. The permittee shall electronically submit all compliance monitoring data and reports using the myDEQ electronic portal provided by ADEQ. The reports required to be electronically submitted include, but are not limited to, the following:
 - a. Discharge Monitoring Reports
 - b. Whole Effluent Toxicity (WET) reports

- c. Original copies of laboratory results
 - d. AZPDES discharge flow records
 - e. Method detection limit studies
 - f. Bench sheets or similar documentation for field testing parameters
 - g. Ammonia data logs
3. For Outfall 001, when sampling the effluent for ammonia, the pH and temperature of the effluent must be recorded at the time of sample collection. Results for all three parameters as well as the applicable ammonia standard and the calculated Ammonia Impact Ratio shall be recorded on the **Ammonia Data Log** provided in Appendix B. The ammonia data log shall be submitted to ADEQ annually to the address information listed in Part II.B.2, above.
 4. If requested to participate, the permittee shall submit the results of the annual NPDES DMR/QA Study to ADEQ and ADHS for all laboratories used in monitoring compliance with this permit by December 31st of each year. The permittee shall also conduct any proficiency testing required by the NPDES DMR-QA Study for those parameters listed in the study that the permittee analyzes in house or tests in the field at the time of sampling (these parameters may include pH and total residual chlorine). All results of the NPDES DMR-QA Study shall be submitted to the email and addresses listed below, or submit by any other alternative mode as specified by ADEQ:

Arizona Department of Environmental Quality
Email: AZPDES@azdeq.gov

Arizona Department of Health Services
Attn: Office of Laboratory Licensure and Certification
250 North 17th Avenue
Phoenix, AZ 85007

5. For the purposes of reporting, the permittee shall use the Limit of Quantitation.
6. For parameters with Daily Maximum Limits or Daily Maximum Assessment Levels in this permit, the permittee shall review the results of all samples collected during the reporting period and report as outlined in Table 5.
7. For parameters with Monthly Average Limits or Monthly Average Assessment Levels in this permit, the permittee shall review the results of all samples collected during the reporting period and report as outlined in Table 6.

Table 5. DMR Reporting Requirements for Daily Maximum Limits and Assessment Levels

For Daily Maximum Limits/Assessment Levels	The Permittee shall Report on the DMR
When the maximum value of any analytical result is greater than or equal to the LOQ	The maximum value of all analytical results
When the maximum value detected is greater than or equal to the laboratory's LOD but less than the LOQ	NODI (Q)
When the maximum value is less than the laboratory's LOD	NODI (B)

Table 6. DMR Reporting Requirements for Monthly Average Limits / Assessment Levels

For Monthly Average Limits/Assessment Levels		The Permittee shall Report on the DMR
If only one sample is collected during the reporting period (weekly, monthly, quarterly, annually, etc.) (In this case, the sample result is also the weekly or monthly average.)	When the value detected is greater than or equal to the LOQ	The analytical result
	When the value detected is greater than or equal to the laboratory's LOD, but less than the LOQ	NODI (Q)
	When the value is less than the laboratory's LOD	NODI (B)
If more than one sample is collected during the reporting period	<p>All samples collected in the same calendar month must be averaged.</p> <ul style="list-style-type: none"> When all results are greater than or equal to the LOQ, all values are averaged If some results are less than the LOQ, use the LOD value in the averaging Use '0' for values less than the LOD 	The highest monthly average which occurred during the reporting period

8. For all field testing, or if the information below is not included on the laboratory reports required by Part II.B.2, the permittee shall attach a bench sheet or similar documentation to each DMR that includes, for all analytical results during the reporting period the following:
 - a. the analytical result,
 - b. the number or title of the approved analytical method, preparation and analytical procedure utilized by the field personnel or laboratory, and the LOD and LOQ for the analytical method for the parameter, and
 - c. any applicable data qualifiers using the most current revision of the Arizona Data Qualifiers (available online at: <http://www.azdhs.gov>)

C. Twenty-four Hour Reporting of Noncompliance

1. The permittee shall orally report to the Emergency Response Unit hotline at (602) 771-2330 any noncompliance that poses imminent threat to the environment or human health within 24 hours from the time the permittee becomes aware of the circumstances. The permittee shall also submit an electronic notification within 5 days of the noncompliance event using the myDEQ electronic portal provided by ADEQ. The permittee shall include in the written notification: a description of the noncompliance and its cause; the period of noncompliance, including dates and times, and, if the noncompliance has not been corrected, the time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance.

The following instances of noncompliance are subject to the 24-hour and 5-day reporting requirements and must be reported orally to the Emergency Response Unit hotline:

- a. Any unanticipated bypass which exceeds any effluent limitations in the permit,
 - b. Any upset which exceeds any effluent limitation in the permit, or
 - c. Any spill or discharge that poses an imminent threat to human health or the environment.
2. All other instances of noncompliance remain subject to the 24-hour and 5-day reporting requirements, and must call the ADEQ AZPDES hotline at (602) 771-1440. For example, an exceedance of any maximum daily

limit for the parameters listed in Part 1.A Table 1 that does not poses an imminent threat to human health or the environment.

3. The permittee shall retain the following monitoring records:
 - a. Date, exact location and time of sampling or measurements performed, preservatives used;
 - b. Individual(s) who performed the sampling or measurements;
 - c. Date(s) the analyses were performed;
 - d. Laboratory(s) which performed the analyses;
 - e. Analytical techniques or methods used;
 - f. Chain of custody forms;
 - g. Any comments, case narrative or summary of results produced by the laboratory. These comments should identify and discuss QA/QC analyses performed concurrently during sample analyses and should specify whether analyses met project requirements and 40 CFR 136. If results include information on initial and continuing calibration, surrogate analyses, blanks, duplicates, laboratory control samples, matrix spike and matrix spike duplicate results, sample receipt condition, or holding times and preservation, these records must also be retained.
 - h. Summary of data interpretation and any corrective action taken by the permittee.

PART III. WHOLE EFFLUENT TOXICITY TESTING REQUIREMENTS

A. General Conditions

1. The permittee shall conduct chronic toxicity tests on discrete samples of the final effluent at the frequencies specified in Part I.
2. Final effluent samples must be taken following all treatment processes, including chlorination and dechlorination, and prior to mixing with the receiving water. The required WET tests must be performed on unmodified samples of final effluent. WET tests conducted on samples that are dechlorinated after collection are not acceptable for compliance with this permit.
3. Chemical testing for all the parameters listed in Parts I.A and B of this permit whose required sample type is a composite shall be performed on a split of at least one of the three discrete samples taken for one chronic WET test. For those parameters listed in Parts I.A and B of this permit whose required sample type is discrete, the testing shall be performed on a discrete sample collected concurrently with one sample, discrete or composite, collected for an acute or chronic WET test.
4. Definitions related to toxicity are found in Appendix A.

B. Chronic Toxicity

1. The permittee shall conduct short-term chronic toxicity tests on three species: the waterflea, *Ceriodaphnia dubia* (survival and reproduction test); the fathead minnow, *Pimephales promelas* (larval survival and growth test); and the green alga, *Pseudokirchneriella subcapitata* (formerly known as *Selenastrum capricornutum* or *Raphidocelis subcapitata*) (growth test).
2. The permittee must follow the USEPA 4th edition manual, "Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms (EPA/821-R-02-013) for all chronic compliance toxicity testing.

3. The chronic toxicity action levels are any one test result greater than 1.6 TUC or any calculated monthly median value greater than 1.0 TUC. If chronic toxicity is detected above these values, follow-up testing is required per Part IV, Section E. A chronic toxicity unit (TUC) shall be calculated as $TUC = 100/NOEC$.
4. The chronic WET test shall be conducted using a series of five dilutions and a control. The following dilution series must be used: 12.5, 25, 50, 75, and 100% effluent.

C. Quality Assurance

1. Effluent samples must be maintained between 0 and 6°C from collection until utilized in the toxicity testing procedure. When a composite sample is required, each aliquot making up the composite must be chilled after collection and throughout the compositing period. The single allowable exception is when a grab sample is delivered to the performing laboratory for test initiation no later than 4 hours following the time of collection.
2. Control and dilution water should be receiving water or lab water as appropriate, as described in the 40 CFR Part 136.3 approved method. If the dilution water used is different from the culture water, a second control, using culture water shall also be used.
3. Reference toxicity tests (a check of the laboratory and test organisms' performance) shall be conducted at least 1 time in a calendar month for each toxicity test method conducted in the laboratory during that month. Additionally, any time the laboratory changes its source of test organisms, a reference toxicity test must be conducted before or in conjunction with the first WET test performed using the organisms from the newer source. Reference toxicant testing must be conducted using the same test conditions as the effluent toxicity tests (i.e., same test duration, etc.).
4. If either the reference toxicant test or the effluent test does not meet all test acceptability criteria as specified in the 40 CFR Part 136.3 approved WET methods, then the permittee must re-sample and re-test within 14 days of receipt of the test results. The re-sampling and re-testing requirements include laboratory induced error in performing the test method.
5. The chronic reference toxicant and effluent tests must meet the upper and lower bounds on test sensitivity as determined by calculating the percent minimum significant difference (PMSD) for each test result. The test sensitivity bound is specified for each test method (see Section 10, Table 6 in EPA/821-R-02-013). There are five possible outcomes based on the PMSD result.
 - a. *Unqualified Pass*- The test's PMSD is within bounds and there is no significant difference between the means for the control and the effluent. The regulatory authority would conclude that there is no toxicity.
 - b. *Unqualified Fail*- The test's PMSD is larger than the lower bound (but not greater than the upper bound) in Table 6 and there is a significant difference between the means for the control and the effluent. The regulatory authority would conclude that there is toxicity.
 - c. *No Significant Difference in Test Controls* - The test's PMSD exceeds the upper bound in Table 6 and there is no significant difference between the means for the control and the effluent. The test is considered invalid. An effluent sample must be collected and another toxicity test must be conducted within 14 days of receipt of the test results.

- d. *Significant Difference in Test Controls* - The test's PMSD exceeds the upper bound in Table 6 and there is a significant difference between the means for the control and the effluent. The test is considered valid. The regulatory authority will conclude that there is toxicity.
- e. *Very Small but Significant Difference*- The relative difference between the means for the control and effluent is smaller than the lower bound in Table 6 and this difference is statistically significant. The test is acceptable and the NOEC should be determined.

D. Toxicity Identification Evaluation (TIE)/Toxicity Reduction Evaluation (TRE) Process

1. If chronic toxicity is detected above a WET action level or Limit specified in this permit and the source of toxicity is known (for instance, a temporary plant upset), the permittee shall conduct one follow-up test within two weeks of receipt of the sample results that exceeded the action level. The permittee shall use the same test and species as the failed toxicity test. For intermittent discharges, the follow-up test shall be conducted whether discharging or not. If toxicity is detected in the follow-up, the permittee shall immediately begin developing a TRE plan and submit the plan to ADEQ for review and approval within 30 days after receipt of the toxic result. Requirements for the development of a TRE are listed in paragraph 3 below. The permittee must implement the TRE plan as approved and directed by ADEQ.
2. If chronic toxicity is detected above an action level or Limit specified in this permit and the source of toxicity is unknown, the permittee shall begin additional toxicity monitoring within two weeks of receipt of the sample results that exceeded the action level. The permittee shall conduct one WET test approximately every other week until either a test exceeds an action level (or limit) or four tests have been completed. The follow-up tests must use the same test and species as the failed toxicity test. For intermittent discharges, the first follow-up test shall be conducted whether discharging or not; the subsequent three follow-up tests shall be conducted during the next three discharge events.
 - a. If none of the four tests exceed a WET action level or limit, then the permittee may return to the routine WET testing frequency specified in this permit.
 - b. If a WET action level or limit is exceeded in any of the additional tests, the permittee shall immediately begin developing a TRE plan and submit the plan to ADEQ for review and approval within 30 days after receipt of the toxic result. Requirements for the development of a TRE are listed in subsection 3, below. The permittee must implement the TRE plan as approved and directed by ADEQ.
3. The permittee shall use the EPA guidance manual *Toxicity Reduction Evaluation Guidance for Municipal Wastewater Treatment Plants*, 1999 (EPA/833/B-99/002) in preparing a TRE plan. The TRE plan shall include, at a minimum, the following:
 - a. Further actions to investigate and identify the causes of toxicity, if unknown. The permittee may initiate a TIE as part of the TRE process using the following EPA manuals as guidance: *Toxicity Identification Evaluation: Characterization of Chronically Toxic Effluents, Phase I*, 1992 (EPA/600/6-91/005F); *Methods for Aquatic Toxicity Identification Evaluations: Phase I, Toxicity Characterization Procedures*, 2nd Edition, 1991 (EPA/600/6-91/003); *Methods for Aquatic Toxicity Identification Evaluations: Phase II, Toxicity Identification Procedures for Samples Exhibiting Acute and Chronic Toxicity*, 1993 (EPA/600/R-92/080); and *Methods for Aquatic Toxicity Identification Evaluations: Phase III, Toxicity Confirmation Procedures for Samples Exhibiting Acute and Chronic Toxicity*, 1993 (EPA/600/R-92/081).

- b. Action the permittee will take to mitigate the impact of the discharge and to prevent the recurrence of toxicity; and
- c. A schedule for implementing these actions.

E. WET Reporting

1. The permittee shall report chronic toxicity results on DMRs in Chronic Toxicity Units (TUC). The TUC for DMR reporting shall be calculated as $TUC = 100/NOEC$.
2. In addition to reporting WET results on DMRs, the permittee shall submit a copy of the full lab report(s) for all WET testing conducted during the monitoring period covered by the DMR. The lab report should report TUC as $100/NOEC$ and as $100/IC_{25}$. If the lab report does not contain any of the following items, then these must also be supplied in a separate attachment to the report: 1) sample collection and test initiation dates, 2) the results of the effluent analyses for all parameters required to be tested concurrently with WET testing as defined in Part I.A and B, Tables 1 and 2, and Part IV.A.3 of this permit, and 3) copies of completed "AZPDES Discharge Flow Records" for the months in the WET monitoring period.
3. WET lab reports and any required additional attachments shall be submitted to ADEQ by the 28th day of the month following the end of the WET monitoring period, or upon request.

PART IV. SPECIAL CONDITIONS

A. Stormwater Requirements

The permittee shall control discharges of stormwater from the site as necessary to not cause or contribute to an exceedance of an applicable surface water quality standard in the protected surface waters. If at any time the permittee becomes aware, or ADEQ determines, that the site's discharge causes or contributes to an exceedance of an applicable surface water quality standard, the permittee shall take corrective action as required in IV.A.4.

1. Stormwater Pollution Prevention Plan (SWPPP)

- a. The permittee shall review the existing SWPPP and revise it as necessary to ensure that they fully and accurately address all the following provisions. Any updates or revisions needed shall be completed within 90 days of the effective date of this permit.
- b. At a minimum the SWPPP shall contain and identify the following requirements:
 - i. Identify individuals at SRP that are members of a stormwater Pollution Prevention Team who are responsible for assisting the facility management implementation, maintenance, and revision of the SWPPP. The plan shall clearly identify the responsibilities of each team member. The activities and responsibilities of the team shall address all aspects of the facility's SWPPP.
 - ii. A site description, including a discussion of industrial activities that occur at the site;
 - iii. A generalized location map (e.g. a USGS quadrangle map) with all protected surface water(s) receiving stormwater discharges from the facility identified;
 - iv. Summary of pollutant sources which may reasonably be expected to add significant amounts of pollutants to stormwater discharges or which may result in the discharge of pollutants during dry weather from the facility. These shall include all activities and exposed materials which may potentially be significant pollutant sources, including from the following activities: loading and unloading operations; outdoor storage; manufacturing, or processing activities; significant dust or particulate generating processes; and onsite waste disposal practices. The description shall specifically list any significant potential source of

pollutants at the site and for each potential source, any pollutant or pollutant parameter (e.g., total suspended solids, copper, etc.) of concern shall be identified.

- v. An inventory of the types of materials handled at the site that may be exposed to precipitation. This shall include a description of significant materials that have been handled, treated, stored or disposed in a manner to allow exposure to stormwater for the past three (3) years; method and location of onsite storage and/or disposal; materials management practices employed to minimize contact of materials with stormwater runoff since January 1, 2000; the location and a description of existing structural and nonstructural control measures to reduce pollutants in storm water runoff; and a description of any treatment the storm water receives.
 - vi. List of significant spills and leaks of pollutants that occurred for the past three (3) years;
 - vii. Document the occurrence of unauthorized non-stormwater discharges;
 - viii. A description of control measures that will be used to ensure compliance with the requirements in Part IV.A.3.
 - ix. The schedule, practices and procedures for the following: good housekeeping, control measure maintenance / repair measures, spill prevention/ response, erosion/ sediment controls, and type and frequency of employee training (See Part IV.3);
 - x. The schedule and documentation procedures utilized for site inspections and visual assessment monitoring;
 - xi. A description of stormwater monitoring and sampling procedures, including outfall identification and describe any exemptions to monitoring;
 - xii. A Sampling and Analysis Plan (see Part IV.B.), if required, including previous sampling results for the previous permit term; and
 - xiii. Signature requirements (See Appendix B).
- c. Site Map: The SWPPP must include a legible site map (or maps) completed to scale, that identifies the following:
- i. Boundaries of the property;
 - ii. Designation of area(s) associated with industrial activities;
 - iii. Identification of adjacent properties;
 - iv. Directions of stormwater flow for areas of the site that generate stormwater discharges with a reasonable potential to contain pollutants (e.g. topographic map or arrows as necessary to depict stormwater flow direction;
 - v. Locations of all stormwater conveyances including ditches, pipes, and swales;
 - vi. Locations of major structural stormwater control measures;
 - vii. Locations of protected surface waters receiving the site's discharges and any special waters clearly labeled within 2.5 miles of the site (can be identified on a generalized site map);
 - viii. Locations where the site's stormwater discharges to a regulated MS4 (where applicable);
 - ix. Locations where significant spills or leaks have occurred in the past three years;
 - x. Locations of outfalls with a unique identification code for each feature;
 - xi. An approximate outline of the areas draining to each outfall;
 - xii. Identification of which outfalls are considered sampling points;
 - xiii. Identification of which outfalls are being treated as substantially identical outfalls;
 - xiv. Locations of outfalls that are inactive or no longer used as outfalls, if practicable;
 - xv. Identification of all outfalls that include allowable non-stormwater discharges under Part I.A.
 - xvi. Location of on-site drywell(s) and their registration number(s);
 - xvii. Sources of run-on to the site from adjacent property that may contain pollutants;

- xviii. Locations of the following activities and features that are exposed to stormwater with the potential to discharge pollutants, including but not limited to: Fueling stations; vehicle and equipment maintenance and/or cleaning areas; loading/unloading areas; locations used for the treatment, storage, or disposal of wastes; liquid storage tanks; processing/storage areas; transfer areas for bulk materials, and; access roads/rail lines used or traveled by carriers of raw materials, manufactured products, waste material, or by-products used or created by the site.
- xix. Drainage Site Map: Documenting the locations of any of the following activities or sources that may be exposed to precipitation or surface runoff: storage tanks, scrap yards, and general refuse areas; short- and long-term storage of general materials (including but not limited to supplies, construction materials, paint equipment, oils, fuels, used and unused solvents, cleaning materials, paint, water treatment chemicals, fertilizer, and pesticides); landfills and construction sites; and stock pile areas.
- xx. Housekeeping: The permittee shall document the good housekeeping measures in Part IV.A.2.g. implemented to meet the effluent limits in Part I of this permit.

2. Measures and Controls:

The permittee shall develop and implement effective stormwater management controls for all identified potential sources of pollution. For each identified potential source, the SWPPP shall describe the nature of the potential discharges, including the types of pollutants likely to be present in each. For each identified potential source, the SWPPP shall describe either structural and/or non-structural controls (BMPs) that shall be designed and implemented to minimize these releases, including:

- a. The selection, design, and installation of these control measures must be in accordance with good engineering practices and follow manufacturers' specifications. Any deviations from such specifications must be justified and the justification shall be maintained and documented in the SWPPP.
- b. If the site's control measures are not effective, the permittee shall modify and/or add additional control measures to meet the requirements of this permit.
- c. The permittee shall assess the type and quantity of pollutants likely to discharge in stormwater or allowable non-stormwater from the site when designing and implementing control measures. At a minimum, the permittee shall consider the following when selecting and designing control measures:
 - i. Preventing stormwater from coming into contact with pollutants is generally more effective, and less costly, than trying to remove pollutants from stormwater;
 - ii. Using control measures in combination is more effective than using control measures in isolation for minimizing pollutants in the site's stormwater discharge;
 - iii. Assessing the type and quantity of pollutants, including their potential to impact the protected surface water(s) quality, is necessary in order to design effective control measures that achieve permit limits;
 - iv. Minimizing impervious areas at the site and infiltrating runoff onsite (including bioretention cells, green roofs, and pervious pavement, among other approaches) can reduce runoff and improve groundwater recharge and stream base flows in local streams, although care must be taken to avoid groundwater contamination;
 - v. Attenuating flow using open vegetated swales and natural depressions can reduce in-stream impacts of erosive flows;

- vi. Using containment to intercept stormwater flows before they leave the site, such as directing flows to non-discharging areas (pits) or installing runoff containment; The permittee shall minimize the exposure of manufacturing, processing, and material storage areas (including loading and unloading, storage, disposal, cleaning, maintenance, and fueling operations) to rain, snow, snowmelt, and runoff in order to minimize pollutant discharges by implementing measures.
- vii. Conserving and/or restoring of riparian buffers help protect streams from stormwater runoff and improve water quality; and
- viii. Using treatment interceptors (e.g., swirl separators and sand filters) may be appropriate in some instances to minimize the discharge of pollutants.
- d. The permittee shall maintain all control measures that are used to achieve effluent limits in this permit in effective operating conditions, as well as all industrial equipment and systems, in order to minimize pollutants in stormwater discharge. This includes measures such as the following:
 - i. Performing inspections and preventive maintenance of stormwater drainage, source controls, treatment systems, plant equipment and systems that could fail and result in contamination of stormwater.
 - ii. Maintaining non-structural control measures (e.g., keep spill response supplies available, personnel appropriately trained); and
 - iii. Cleaning catch basins.
- e. If control measures are in need of repair or replacement, the permittee shall make any necessary maintenance changes as soon as practicable. All reasonable steps shall be taken to minimize the discharge of pollutants until the final repair is completed. This shall include cleaning up any contaminated surfaces so that the material will not be discharged in subsequent storm events. Final repairs or replacement of stormwater controls should be completed as soon as feasible but no later than 14 calendar days following discovery, or before the next measurable storm event, whichever is sooner. If necessary changes cannot be implemented within the specified timeframe(s), the permittee shall document within the SWPPP the reasons for the delay, a schedule for completing the necessary changes, date completed, and any back-up control measures in place to ensure compliance with permit requirements, should a runoff event occur while a control measure is off-line (either in part or in whole).
- f. The permittee shall minimize the exposure of manufacturing, processing, and material storage areas (including loading and unloading, storage, disposal, cleaning, maintenance, and fueling operations) to rain, snow, snowmelt, and runoff to minimize the pollutant discharges by implementing measures such as, the following:
 - i. Locating industrial materials and activities inside or protect with storm resistant shelter, as practicable;
 - ii. Using grading, berming or curbing to prevent runoff of contaminated flows, and divert clean stormwater around industrial materials and activities;
 - iii. Locating materials, equipment, and activities so that potential leaks or spills are contained or able to be contained or diverted before discharging off-site;
 - iv. Using spill/overflow protection;
 - v. Clean up spills and leaks promptly using dry methods (e.g. absorbent's);
 - vi. Covering fueling area(s) or minimize stormwater run-on/runoff to fueling area(s);
 - vii. Store leaky vehicles and equipment indoors, or if stored outdoors, use drip pans and absorbents;

- viii. Draining fluids from equipment and vehicles that will be decommissioned, and for any equipment and vehicles that will remain unused for extended periods of time;
- ix. Performing all vehicle and /or equipment cleaning operations indoors, under cover, or in bermed areas that prevent runoff and run-on and also that capture any overspray; and
- x. Ensuring that all wash water not meeting the requirements in Part 1.1.3.1. (7) and (8), drains to a proper collection system (i.e., not the stormwater drainage system).

In selecting, designing, installing, and implementing appropriate control measures, permittees are encouraged to consult EPA's internet-based resources relating to stormwater runoff management and green stormwater infrastructure.

- g. The permittee shall minimize generation of dust and off-site tracking of raw, final, or waste materials in order to minimize pollutant discharges.
- h. General Good Housekeeping Requirements:
The permittee shall implement good housekeeping measures for all exposed areas that are potential sources of pollutants. Such measures may include the following:
 - i. Sweep or vacuum at regular intervals;
 - ii. Keeping materials orderly and labeled;
 - iii. Storing materials in appropriate containers;
 - iv. Cleaning up spills and leaks promptly using dry methods (e.g., absorbents) to prevent the discharge of pollutants;
 - v. Using drip pans and absorbents under or around leaky vehicles and equipment or store indoors where feasible;
 - vi. Keep dumpster lids closed when not in use, where feasible. For dumpsters and roll off boxes that do not have lids and could leak, ensure that discharges have a control (e.g., secondary containment, treatment) when needed.
 - vii. Minimize the potential for waste, garbage and floatable debris to be discharged by keeping exposed areas free of such materials, or by intercepting them before they are discharged.
- i. Industry Specific Good Housekeeping Requirements: The following areas must be specifically addressed:
 - i. Fugitive Dust Emissions: The permittee shall minimize generation of dust and off-site tracking of raw, final, or waste materials to minimize pollutants. The permittee shall implement effective controls to minimize the tracking of dust offsite, such as installing specially designed tires or washing vehicles in a designated area before they leave the site and controlling the wash water.
 - ii. Delivery Vehicles: The permittee shall implement effective controls to minimize contamination of stormwater runoff from delivery vehicles arriving at the plant site such as procedures to inspect delivery vehicles arriving at the plant site and ensure overall integrity of the body or container and procedures to deal with leakage or spillage from vehicles or containers.
 - iii. Fuel Oil Unloading Areas: The permittee shall implement effective controls to minimize contamination of precipitation or surface runoff from fuel oil unloading areas, such as using containment curbs in unloading areas, having personnel familiar with spill prevention and response procedures present during deliveries to ensure that any leaks or spills are immediately contained and cleaned up, and using spill and overflow protection devices (e.g., drip pans, drip diapers, or other containment devices placed beneath fuel oil connectors to contain potential spillage during deliveries or from leaks at the connectors).

- iv. Chemical Loading and Unloading Areas: The permittee shall implement effective controls to minimize contamination of precipitation or surface runoff from chemical loading and unloading areas, such as: using containment curbs at chemical loading and unloading areas to contain spills, having personnel familiar with spill prevention and response procedures present during deliveries to ensure that any leaks or spills are immediately contained and cleaned up, loading and unloading in covered areas and storing chemicals indoors.
- v. Miscellaneous Loading/Unloading Areas: The permittee shall implement effective controls to minimize contamination of precipitation or surface runoff from loading and unloading areas, such as: covering the loading area; grading, berming, or curbing around the loading area to divert run-on; locating the loading and unloading equipment and vehicles so that leaks are contained in existing containment and flow diversion systems; or equivalent procedures.
- vi. Liquid Storage Tanks: The permittee shall implement effective controls to minimize contamination of surface runoff from above-ground liquid storage tanks, such as using protective guards around tanks, containment curbs, spill and overflow protection, dry cleanup methods, or equivalent measures.
- vii. Large Bulk Fuel Storage Tanks: The permittee shall implement effective controls to minimize contamination of surface runoff from large bulk fuel storage tanks including the use of containment berms or other equivalent measures. The permittee shall also comply with applicable State and Federal laws including Spill Prevention Control and Countermeasures (SPCC).
- viii. Spill Reduction Measures: The permittee shall implement effective controls to minimize the potential for an oil or chemical spill. These shall be detailed in the SWPPP or the permittee may reference the appropriate part of the site's SPCC plan if applicable. As part of the routine site inspection the permittee shall inspect the structural integrity of all above-ground tanks, pipelines, pumps, and related equipment that may be exposed to stormwater, and make any necessary repairs immediately.
- ix. Oil Bearing Equipment in Switchyards: The permittee shall implement effective controls to minimize contamination of surface runoff from oil-bearing equipment in switchyard areas, such as the use of level grades and gravel surfaces to retard flows and limit the spread of spills, or collecting runoff in perimeter ditches.
- x. Ash Loading Areas: The permittee shall implement effective controls to reduce or control the tracking of ash and residue from ash loading areas. Clear the ash building floor and immediately adjacent roadways of spillage, debris, and excess water before departure of each loaded vehicle.
- xi. Areas Adjacent to Disposal Ponds or Landfills: The permittee shall implement effective controls to minimize contamination of surface runoff from areas adjacent to disposal ponds or landfills, reduce ash residue that may be tracked on to access roads traveled by residue handling vehicles, and reduce ash residue on exit roads leading into and out of residue handling areas.
- xii. Landfills, Scrap yards, Surface Impoundments, Open Dumps, General Refuse: The permittee shall implement effective controls to minimize the potential for contamination of runoff from these areas.
- xiii. Vehicle Maintenance: The permittee shall implement measures that prevent or minimize the potential for contamination from vehicle maintenance activities, if performed onsite.

- xiv. Residue-Hauling Vehicles: The permittee shall inspect all residue-hauling vehicles for proper load covering, adequate gate sealing, and overall integrity of the container body. Repair vehicles without load covering or adequate gate sealing, or with leaking containers or beds.
- xv. Material Storage Areas: The permittee shall implement measures that prevent or minimize the potential for contamination from material storage areas, including areas used for temporary storage of miscellaneous products, and construction materials.
- xvi. Sediment and Erosion Controls: The permittee shall minimize on-site erosion and sedimentation in order to minimize pollutant discharges. The permittee shall identify areas which due to topography, activities, or other factors have a high potential for significant soil erosion, and identify structural, vegetative, and/or stabilization measures to be used to limit erosion. In selecting, designing, installing, and implementing appropriate control measures, permittees are encouraged to consult EPA's internet-based resources relating to Stormwater BMPs for erosion and sedimentation. If the permittee uses polymers and/or other chemical treatments as part of the controls, the permittee must identify the polymers and/or chemicals used and the purpose in the SWPPP. The permittee must include the following areas in the assessment:
 - Loading and unloading areas;
 - Access roads;
 - Material handling areas;
 - Storage areas; and
 - Any other areas where heavy equipment and vehicle use is prevalent.
- j. Preventative Maintenance: The permittee shall implement a preventative maintenance program that includes timely evaluation and maintenance of stormwater management devices, such as cleaning oil/water separators, catch basins. The permittee should routinely evaluate and test facility equipment and systems to uncover conditions that could cause breakdowns or failures resulting in discharges of pollutants to surface waters, and shall ensure appropriate maintenance of such equipment and systems.
- k. Spill Response Procedures: The permittee shall implement specific material handling procedures, storage requirements, and use of equipment such as diversion valves, if applicable, to prevent spills.
 - i. The permittee shall minimize the potential for leaks, spills, and other releases that may be exposed to stormwater and develop plans for timely and effective clean-up of spills if, or when they occur in order to minimize pollutant discharges.
 - ii. The permittee shall describe procedures for cleaning up spills for cleaning spills and train appropriate personnel to implement these procedures. The permittee shall ensure that equipment necessary to implement a cleanup is available to personnel.
- l. Management of Stormwater Runoff: The permittee shall minimize the discharge of pollutants from the site by implementing control measures. In selecting, designing, installing, and implementing appropriate control measures, permittees are encouraged to consult EPA's internet-based resources relating to stormwater runoff management and green stormwater infrastructure. These measures may include, but are not limited to:
 - i. Diverting clean stormwater around industrial materials and activities;
 - ii. Using Infiltration, reuse, containment and reduction to impacted runoff, or
 - iii. Treating and/or recycling stormwater runoff collected.

3. Corrective Actions

- a. The permittee shall control discharges from the site as necessary to not cause or contribute to an exceedance of an applicable surface water quality standard in a protected surface water. If at any time, the permittee becomes aware of, or ADEQ determines, that the site's discharge causes or contributes to an exceedance of an applicable surface water quality standard, the permittee shall take the corrective action as described under this Section.
- b. The following conditions require corrective action:
 - i. An unauthorized discharge (e.g., non-stormwater discharge not authorized by this or another AZPDES permit to a protected surface water or to a regulated MS4.);
 - ii. The permittee becomes aware, or ADEQ determines, that a discharge from the site causes or contributes to an exceedance of applicable surface water quality standard(s);
- c. The permittee shall review the selection, design, installation, and implementation of a site's control measures and revise as necessary to ensure compliance with this permit.
- d. A routine analytical monitoring exceedance (i.e., above an action level) is not considered a permit violation and does not require a corrective action, if the permittee evaluates and revises the controls measures as necessary and submits the necessary reporting (Part II.C.).
- e. The permittee shall take immediate actions to mitigate any condition(s) identified in Section 5.a., above and document the discovery within 72 hours of discovery, including the following:
 - i. Identification of the condition triggering the need for corrective action review;
 - ii. Description of the problem/incident including material type and amount;
 - iii. Date/time the problem was identified;
 - iv. The location of the incident;
 - v. The cause of the spill, leak, other release or sampling exceedance, if applicable;
 - vi. The outfall name(s)/ locations effected; and
 - vii. The affected protected surface water.
- f. Within 14 days of discovery (or before the next storm event if possible, whichever is sooner) the permittee shall complete and document the following:
 - i. A summary of corrective action taken or to be taken, including modifications to control measures, in order to minimize or prevent the reoccurrence of a discharge of a pollutant(s) or prevent further exceedance(s);
 - ii. Identify and describe SWPPP modification(s) that are required as a result of this discovery and/or corrective actions;
 - iii. Provide date corrective action initiated or will be initiated;
 - iv. Provide date corrective action completed or expected to be completed;
 - v. Results of any analytical monitoring that prompted corrective action, including any subsequent sampling results, if available;
 - vi. Describe any permit contingency actions that will be required;
 - vii. If corrective actions cannot be implemented within the specified timeframe(s), the permittee shall document the reasons for the delay, provide an implementation schedule for completing the necessary changes, including any back-up practices in place to ensure compliance with applicable effluent limitations, should a runoff event occur while a control measure is off-line;
 - viii. If no corrective action is needed, describe the basis for that determination;
 - ix. Provide the date and the outcome of the last four (4) routine site inspections; and
 - x. A signed certified statement in accordance with Appendix B.

- g. Any corrective action documentation taken pursuant to this section shall be kept with the site's stormwater pollution prevention plan (SWPPP).

4. Inspections

- a. During normal site operating hours, the permittee must conduct monthly routine inspections and visually examine areas of the site covered by this permit, including the following:
- i. Areas where industrial materials or activities are exposed to stormwater with the potential to discharge;
 - ii. Areas that are identified as potential pollutant sources in the SWPPP;
 - iii. Locations where spills and leaks from industrial equipment, drums, tanks and other containers that can occur or has occurred in the past three years;
 - iv. Areas where tracking or blowing of sediment, trash, raw, final or waste materials is or has occurred from areas of no exposure to exposed areas, including locations where vehicles enter or exit the site;
 - v. Discharge points;
 - vi. Loading and unloading areas;
 - vii. Switchyards;
 - viii. Fueling areas;
 - ix. Bulk storage areas;
 - x. Ash handling areas;
 - xi. Areas adjacent to disposal ponds and landfills;
 - xii. Maintenance areas;
 - xiii. Liquid storage tanks; and
 - xiv. Long-term and short-term storage areas.
- b. A qualified person(s) shall conduct routine site inspections. A member of the Stormwater Pollution Prevention Team shall conduct or participate in the routine site inspection.
- c. The permittee shall conduct at least one of the routine site inspections each calendar year while a stormwater event or discharge is occurring at one or more outfalls, when practicable, to determine that the control measures are functioning correctly. If there is no measurable storm event(s) or discharge during a calendar year, the permittee shall document the inability to perform a routine inspection when a discharge is occurring. In this case, the permittee must still complete four routine quarterly inspections per calendar year.
- d. The permittee shall document the findings of each routine site inspection performed and maintain this documentation in the SWPPP. Inspections shall be submitted to ADEQ upon request. The minimum documentation for each routine inspection shall include:
- i. The inspection date and time;
 - ii. Name(s) and signature(s) of the inspector;
 - iii. Weather information;
 - iv. All observations relating to the implementation of stormwater control measures at the site including:
 - A description of any discharges occurring at the time of the inspection;
 - Any previously identified discharges from and/or pollutants at the site;
 - Any evidence of, or potential for, previously unidentified pollutants entering the drainage system; and

- Observations regarding the physical condition of and around all outfalls, including any flow dissipation devices, and evidence of pollutants in discharges and/or to the protected surface water.
 - v. Any control measures needing repairs or maintenance;
 - vi. Any failed control measures that need replacement;
 - vii. Any additional control measures needed to comply with the permit requirements; and
 - viii. Any required revisions to the SWPPP resulting from the inspection.
- e. Any corrective action required as a result of a routine inspection must be performed consistent with Part IV.A.4.

5. Comprehensive Site Evaluation

Qualified personnel shall conduct comprehensive site evaluations at least annually that address the following:

- a. Areas contributing to a stormwater discharge associated with industrial activity shall be visually inspected for evidence of, or the potential for, pollutants entering the drainage system. Measures to reduce pollutant loadings shall be evaluated to determine whether they are adequate and properly implemented or whether additional control measures are needed. Structural stormwater management measures, sediment and erosion control measures, and other structural pollution prevention measures identified in the SWPPP shall be observed to ensure that they are operating correctly. A visual evaluation of all equipment needed to implement the plan, including spill response ones, shall be made.
- b. Based on the results of the evaluation, SRP shall revise the description of potential pollutant sources (Description of Potential Pollutant Sources) and pollution prevention measures and controls identified in the SWPPP (Measures and Controls) as appropriate within 2 weeks after the evaluation. The permittee must implement any changes to the plan within 12 weeks after the evaluation.
- c. Records of the comprehensive site evaluations must be documented in the SWPPP.

6. Employee Training

The permittee shall train all employees who work in areas where industrial materials or activities are exposed to stormwater, or who are responsible for implementing activities necessary to meet the conditions of this permit (e.g., inspectors, maintenance personnel), including all members of the site's Stormwater Pollution Prevention Team. Training must cover both the specific control measures and the monitoring, inspection, planning, reporting, and documentation requirements described in this permit. The permittee must ensure the following personnel understand the requirements of this permit and their specific responsibilities with respect to those requirements, for the following:

- a. Personnel who are responsible for the design, installation, maintenance, and/or repair of control measures (including pollution prevention measures);
- b. Personnel responsible for the storage and handling of chemicals and materials that could become contaminants in stormwater discharges;
- c. Personnel who are responsible for taking and documenting corrective actions as required in Part 3;
- d. Personnel who are responsible for conducting and documenting monitoring and inspections as required in Parts 4 and 6.
- e. Personnel must be trained in the following areas, if related to the scope of their job duties (e.g., only personnel responsible for conducting inspections need to understand how to conduct inspections):
- f. An overview of what is in the SWPPP;

- g. Spill response procedures, good housekeeping, maintenance requirements, and material management practices;
- h. The location of all controls on the site required by this permit, and how they are to be maintained;
- i. The proper procedures to follow with respect to the permit's pollution prevention requirements; and
- j. When and how to conduct inspections, record applicable findings, and take corrective actions as required by Part 3.

7. Non-Stormwater Discharges (other than authorized discharges from Outfalls 001, 002, 007, and 012)

- a. The permittee shall test or evaluate for the presence of non-stormwater discharges at the facility and shall include an annual certification in the SWPPP. The certification shall identify any potential significant sources of non-stormwater at the site; and describe the results of any test and/or evaluation for the presence of non-storm water discharges, the evaluation criteria or testing method used, the date of any testing and/or evaluation, and the onsite drainage points that were directly observed during the test.
- b. Except for flows from firefighting activities, SRP must identify and describe in the SWPPP, any sources of non-storm water that are combined with on-site stormwater. The SWPPP must ensure the implementation of appropriate pollution prevention measures for the non-storm water component(s) of the discharge.
- c. If SRP is unable to provide the certification required (testing for non-storm water discharges), SRP must notify ADEQ in the annual report for that year and include that notice in the SWPPP. If the failure to certify is caused by the inability to perform adequate tests or evaluations, such notification shall describe: the procedure of any test conducted for the presence of non-storm water discharges; the results of such test or other relevant observations; potential sources of non-storm water discharges; and, why adequate tests were not feasible. Non-storm water discharges to waters of the United States which are not authorized by an AZPDES permit are unlawful, and must be terminated.

8. Monitoring and Reporting:

Discharge monitoring and reporting of stormwater discharges from Outfalls 003 and Outfall 012 (which is comingled with low volume wastewater) are covered under Part I. and Part II. of the Permit.

a. Exceedance of an Action Level for Routine Analytical Monitoring

- i. If a sample result is above an action level for routine analytical monitoring, the permittee shall evaluate the cause of the exceedance of the action level. Within 15 days of discovery of a sample result above an action level, the permittee shall:
 - Assess the existing control measures to ensure the control measures are properly maintained and appropriate for reducing pollutant discharges;
 - Identify circumstances that lead to the sample value above an action level, including, but not limited to the following: changes in site practices, climatic conditions, new or expanded operations, spill, leaks, or other release of pollutants; and;
 - Review and update the SWPPP.

- i. Within 30 days of discovery of a sample result above an action level, the permittee shall complete and submit a Control Measure Assessment Report containing the following information to AZPDES@azdeq.gov.
 - Date of discovery;
 - Description of the exceedance (e.g., outfall ID, parameter(s), sample result, action level in permit);
 - Summary of the reason(s) causing the exceedance;
 - Explanation of the control measures that were evaluated and modified, if applicable, including the date of the evaluation and date of modification(s);
 - Describe any other follow-up actions (e.g., more frequent inspections, additional employee training), if applicable;
 - Verification that SWPPP updates were completed, were applicable; and
 - A signed and certified statement in accordance with Appendix B.
- b. **Visual Assessments of Stormwater Discharges**
 - i. The permittee, during normal site operating hours, shall perform two visual assessments during the summer wet season and two visual assessments during the winter wet season when the site is discharging. Wet seasons, for the purposes of visual assessments, are defined as follows:
 - Summer wet season: June 1 – October 31
 - Winter wet season: November 1 – May 31
 - ii. Twice per wet season for the permit term, the permittee shall collect a stormwater sample from each outfall (except as noted in Part 4.2.3) and conduct a visual assessment of that sample. The visual assessment samples are not required to be collected consistent with 40 CFR Part 136 procedures, but must be collected in such a manner that the samples are representative of the stormwater discharge. The visual assessment shall be made:
 - Of a sample in a clean, colorless glass, or plastic container, and examined in a well-lit area;
 - On samples collected within the first 30 minutes of an actual discharge from a storm event. If it is not possible to collect the sample within the first 30 minutes of discharge, the sample must be collected as soon as practicable after the first 30 minutes and the permittee shall document why it was not possible to take samples within the first 30 minutes. In the case of snowmelt, samples shall be taken during a period with a measurable discharge from the site; and
 - On discharges that occur at least 72 hours (3 calendar days) from a previous discharge.
 - iii. The permittee shall visually inspect the sample for the following water quality characteristics:
 - Color;
 - Odor;
 - Clarity;
 - Floating solids;
 - Settled solids;
 - Suspended solids;

- Foam;
 - Oil sheen; and
 - Other obvious indicators of stormwater pollution.
- iv. The permittee shall document the results of the visual assessments and maintain this documentation with the SWPPP. The visual assessment findings need not be submitted to ADEQ, unless specifically requested by the Department. At a minimum, the documentation of the visual assessment shall include, but not be limited to:
- Sample location(s);
 - Sample collection date and time, and visual assessment date and time for each sample;
 - Personnel collecting the sample and performing visual assessment, and their signatures;
 - Nature of the discharge (i.e., runoff or snowmelt);
 - Results of observations of the stormwater discharge;
 - Probable sources of any observed stormwater contamination; and
 - If applicable, why it was not possible to take samples within the first 30 minutes; and
 - Signature of person conducting the visual assessments.
- v. Exceptions to visual assessments of stormwater discharges include the following:
- Absence of discharge provided the permittee documents the absence of discharge in the visual assessment documentation and retains that record in the SWPPP; and
 - Adverse weather conditions provided the permittee documents the adverse weather conditions in the visual assessment documentation and retains that record in the SWPPP.

c. Corrective Actions

The permittee shall submit a Corrective Action Report containing the information from Part IV.A.3.e. to ADEQ within 30 days from the date of discovery to AZPDES@azdeq.gov.

B. Chemical Additives:

1. Chemical Use

- a. Chemicals added for cooling tower maintenance shall have no detectable amount of the 126 priority pollutants, except for zinc and chromium as specified in this permit.
- b. The permittee shall maintain a chemical use log at the facility of all chemical additives added to the water treatment systems and cooling tower that are eventually discharged from the facility. The chemical use log shall be made available to the Department upon request. The log shall include a list of the chemicals used, the use of each chemical, the location of use of each chemical, and the approximate quantity of chemical used over a given time period.
- c. The permittee shall notify ADEQ in writing of any additional new chemical additive within one business day of its use in the water treatment system or cooling tower. The notification shall include

the name of the chemical additive, the reason for its use, and the approximate quantity to be used over a given time.

2. Discharge Prohibitions

- a. Discharge of any product registered under the Federal Insecticide, Fungicide and Rodenticide Act to any waste stream which may ultimately be released to lakes, rivers, streams or other waters of the United States is prohibited unless specifically authorized elsewhere in this permit.
- b. Discharge of any waste resulting from the combustion of toxic or hazardous wastes to any waste stream which ultimately discharges to waters of the United States is prohibited, unless specifically authorized elsewhere in this permit.

3. Microbiological Control

WET testing must be conducted after use of microbiological control agents if chemical is discharged from Outfall 001. These tests may be used as annual WET tests required in Table 3. If no toxicity is detected after four WET tests following the use of a specific chemicals, WET testing after that chemical use may be discontinued after notifying the Department.

4. Reporting

By January 31st of each year, the permittee shall submit to ADEQ, an annual summary of the quantities of all chemicals, listed by both chemical and trade names, which have been used for cooling, water treatment, descaling and/or microbiological control at the facility in the past calendar year. The report shall be submitted to AZPDES@azdeq.gov.

C. Reopener

1. This permit may be modified per the provisions of A.A.C. R18-9-B906, and R18-9-A905 which incorporates 40 CFR Part 122. This permit may be reopened based on newly available information; to add conditions or limits to address demonstrated effluent toxicity; to implement any EPA-approved new Arizona water quality standard; or to re-evaluate reasonable potential (RP), if Assessment Levels in this permit are exceeded.

Appendix A. Part A: Acronyms

A.A.C.	Arizona Administrative Code
ADEQ	Arizona Department of Environmental Quality
ADHS	Arizona Department of Health Services
EQ	Exceptional Quality (biosolids)
AZPDES	Arizona Pollutant Discharge Elimination System
A.R.S.	Arizona Revised Statutes
CFR	Code of Federal Regulations
CFU	Colony Forming Units
Director	The Director of ADEQ or any authorized representative thereof
DMR	Discharge Monitoring Report
EPA	The U.S. Environmental Protection Agency
kg/day	Kilograms per day
MGD	Million Gallons per Day
mg/L	Milligrams per Liter, also equal to parts per million (ppm)
MPN	Most Probable Number
NPDES	National Pollutant Discharge Elimination System
PFU	Plaque-Forming Unit
QA	Quality Assurance
SSU	Sewage Sludge Unit
TBEL	Technology-based Effluent Limitation
µg/L	Micrograms per Liter, also equal to parts per billion (ppb)
WQBEL	Water quality-based Effluent Limitation

Appendix A. Part B: Definitions

Action Levels for routine stormwater monitoring	Pollutant concentrations that are based on the designated use of the protected surface water and are used to assess the overall effectiveness of stormwater control measures. An exceedance of an action level is not necessarily a permit violation.
Acute Toxicity Test	A test used to determine the concentration of effluent or ambient waters that produces an adverse effect (lethality) on a group of test organisms during a short-term exposure (e.g., 24, 48, or 96 hours). Acute toxicity is measured using statistical procedures (e.g., pint estimate techniques or hypothesis testing) and is reported as PASS/FAIL or in TUas, where $TUa = 100LC_{50}$.
Acute-to Chronic Ratio (ACR)	Is the ratio of the acute toxicity of an effluent or a toxicant to its chronic toxicity. It is used as a factor for estimating chronic toxicity on the basis of acute toxicity data, or for estimating acute toxicity on the basis of chronic toxicity data.
Chronic Toxicity Test	A test in which sublethal effects (e.g., reduced growth or reproduction) are measured in addition to lethality. Chronic toxicity is measured as $TUc = 100/NOEC$ or $TUc = 100/ECp$ or $100/ICp$. The ICp and ECp value should be the approximate equivalent of the $NOEC$ calculated by hypothesis testing for each test method.

Control Measures	Any stormwater control measure or other method (including narrative effluent limitations) used to prevent or reduce the discharge of pollutants to Waters of the United States.
Daily Maximum Concentration Limit	The maximum allowable discharge of a pollutant in a calendar day as measured on any single discrete sample or composite sample.
Daily Maximum Mass Limit	The maximum allowable total mass of a pollutant discharged in a calendar day.
Discharge of a Pollutant	Defined in 40 CFR § 122.2 as any addition of any “pollutant” or combination of pollutants to a protected surface water from any “point source,” or any addition of any pollutant or combination of pollutants to the waters of the “contiguous zone” or the ocean from any point source other than a vessel or other floating craft which is being used as a means of transportation. This includes additions of pollutants into protected surface waters from: surface runoff which is collected or channeled by man; discharges through pipes, sewers, or other conveyances, leading into privately owned treatment works.
Discharge point	The location(s) where stormwater is discharged from the facility or site.
Discrete or Grab Sample	An individual sample of at least 100 mL collected from a single location, or over a period of time not exceeding 15 minutes.
Effect Concentration Point (ECP)	A point estimate of the toxicant (or effluent) concentration that would cause an observable adverse effect (e.g., survival or fertilization) in a given percent of the test organisms, calculated from a continuous model (e.g., USEPA Probit Model).
Effluent Dependent Water	Effluent Dependent Water means a surface water or portion of a surface water that consists of a point source discharge without which the surface water would be ephemeral. An effluent dependent water may be perennial or intermittent depending on the volume and frequency of the point source discharge of treated wastewater.
Ephemeral Water	Ephemeral water means a surface water or portion of surface water that flows or pools only in direct response to precipitation.
Feasible	Means technologically possible and economically practicable and achievable in light of best industry practices.
Hardness	The sum of the calcium and magnesium concentrations, expressed as calcium carbonate (CaCO ₃) in milligrams per liter.
Hypothesis Testing	A statistical technique (e.g., Dunnetts test) that determines what concentration is statistically different from the control. Endpoints determined from hypothesis testing are NOEC and LOEC. The two hypotheses commonly tested in WET are: Null hypothesis (H ₀): The effluent is not toxic. Alternative hypothesis (H _a): The effluent is toxic.
Impaired Water	Impaired water means a protected surface water for which credible scientific data exists that satisfies the requirements of section 49-232, and that, in the case of waters of the U.S., demonstrate that the water should be identified pursuant to 33 United States Code section 1313(d) and the regulations implementing that statute
Inhibition Concentration (IC)	A point estimate of the toxicant concentration that would cause a given percent reduction in a non-lethal biological measurement (e.g., reproduction or growth) calculated from a continuous model (e.g., USEPA Interpolation Method). IC25 is a point estimate of the toxicant

	concentration that would cause a 25% reduction in a non-lethal biological measurement.
Intermittent Water	Intermittent water means a surface water or portion of surface water that flows continuously during certain times of the year and more than in direct response to precipitation, such as when it receives water from a spring, elevated groundwater table or another surface source such as melting snowpack.
LC50	The toxicant (or effluent) concentration that would cause death in 50 percent of the test organisms.
Limit of Quantitation (LOQ)	The minimum levels, concentrations, or quantities of a target variable such as an analyte that can be reported with a specific degree of confidence. The calibration point shall be at or below the LOQ. The LOQ is the concentration in a sample that is equivalent to the concentration of the lowest calibration standard analyzed by a specific analytical procedure, assuming that all of the method-specified sample weights, volumes, and processing steps have been followed.
Limit of Detection (LOD)	An analyte and matrix-specific estimate of the minimum amount of a substance that the analytical process can reliably detect with a 99% confidence level. This may be laboratory dependent and is developed according to R9014-615(C)(7).
Materials	Includes, but is not limited to: raw materials; fuels; materials such as solvents, detergents, and plastic pellets; finished materials such as metallic products; raw materials used in food processing or production; hazardous substances designated under section 101(14) of CERCLA; any chemical the facility is required to report pursuant to section 313 of Title III of SARA; fertilizers; pesticides; and waste products such as ashes, slag and sludge that have the potential to be released with stormwater discharges. See 40 CFR 122.26(b)(12).
Measurable Stormwater Event	A storm event that results in a stormwater discharge from one or more discharge points at the site. Measurable storm events must be separated by a minimum of 72 hours between stormwater discharges.
Method Detection Limit (MDL)	See LOD
Minimize	Reduce and/or eliminate to the extent achievable using control measures (including best management practices) that are technologically available and economically practicable and achievable in light of best industry practices.
Mixing Zone	An area where an effluent discharge undergoes initial dilution and may be extended to cover the secondary mixing in the ambient waterbody. A mixing zone is an allocated impact zone where water quality criteria can be exceeded as long as acutely toxic conditions are prevented.
Monthly or Weekly Average Concentration Limit	Other than for bacteriological testing, means the highest allowable average calculated as an arithmetic mean of consecutive measurements made during calendar month or week, respectively. The "monthly or weekly average concentration limit" for <i>E. coli</i> bacteria means the highest allowable average calculated as the geometric mean of a minimum of four (4) measurements made during a calendar month or week, respectively. The geometric mean is the nth root of the product of n numbers. For either method (CFU or MPN), when data are reported as "0" or non-detect then input a "1" into the calculation for the geometric mean.

Municipal Separate Storm Sewer	<p>Conveyance or system of conveyances (including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, man-made channels, or storm drains):</p> <ul style="list-style-type: none"> a. Owned or operated by a State, city, town, borough, county, parish, district, association, or other a. Industrial Stormwater Permit - 2019 b. Arizona Department of Environmental Quality A-4 c. public body (created by or pursuant to State law) having jurisdiction over disposal of sewage, industrial wastes, stormwater, or other wastes, including special districts under State law such as a sewer district, flood control district or drainage district, or similar entity, or a designated and approved management agency under section 208 of the Clean Water Act (33 U.S.C. 1288) that discharges to protected surface waters; d. Designed or used for collecting or conveying stormwater; e. Which is not a combined sewer; and f. d. Which is not part of a Publicly Owned Treatment Works
Non-structural controls	Pollution prevention methods that are not physically constructed, including procedures, schedules, training and other practices to prevent or reduce the discharge of pollutants.
Non-stormwater discharges	Discharges that do not originate from storm events. They can include, but are not limited to, air conditioner condensate, non-contact cooling water, pavement wash water, external building washdown, irrigation water, or uncontaminated ground water or spring water. See Part 1.1.3.
Non-wotus protected surface water	Non-wotus protected surface water means a protected surface water that is not a WOTUS.
No Observed Effect Concentration (NOEC)	The highest tested concentration of effluent or toxicant, that causes no observable adverse effect on the test organisms (i.e., the highest concentration of toxicant at which the values for the observed responses are not statistically significant different from the controls).
Point Estimate Techniques	As Probit, Interpolation Method, Spearman-Kärber are used to determine the effluent concentration at which adverse effects (e.g., fertilization, growth or survival) occurred. For example, concentration at which a 25 percent reduction in fertilization occurred.
Point Source	Point Source means any discernible, confined and discrete conveyance, including, any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operation or vessel or other floating craft from which pollutants are or may be discharged to a protected surface water. Point source does not include return flows from irrigated agriculture.
Pollutant	Defined in 40 CFR § 122.2 as a partial listing from this definition includes: dredged spoil, solid waste, incinerator residue, filter backwash, sewage, garbage, sewage sludge, munitions, chemical wastes, biological materials, heat, wrecked or discarded equipment, rock, sand, cellar dirt, and industrial, municipal and agricultural waste discharged into water. See A.A.C. R18-9-A901 (27).
Protected Surface Waters	Protected Surface Waters means waters of the State listed on the protected surface water list under Section 49-221, Subsection G and all WOTUS.

Publicly Owned Treatment Works	Publicly owned treatment works" means a treatment works owned by this state or a municipality of this state as defined in section 502(4) of the clean water act or that discharges to a protected surface water.
Qualified Personnel	Qualified Personnel are those (either the permittee's employees or outside consultants) who possess the knowledge and skills to assess conditions and activities that could impact stormwater quality at the facility, and who can also evaluate the effectiveness of control measures.
Reportable Quantity Release	Release of a hazardous substance at or above the established legal threshold that requires emergency notification. Refer to 40 CFR Parts 110, 117, and 302 and A.R.S. § 49-284 for complete definitions and reportable quantities for which notification is required.
Reference Toxicant Test	A toxicity test conducted with the addition of a known toxicant to indicate the sensitivity of the organisms being used and demonstrate a laboratory's ability to obtain consistent results with the test method. Reference toxicant data are part of the routine QA/QC program to evaluate the performance of laboratory personnel and test organisms.
Runoff	Rainwater, leachate, or other liquid that drains over any part of a land surface and runs off of the land surface.
Runoff Coefficient	The fraction of total rainfall that will appear at the conveyance as runoff. See 40 CFR 122.26(b)(11).
Run-on	
Significant Difference	Defined as statistically significant difference (e.g., 95% confidence level) in the means of two distributions of sampling results.
Significant Spills and Leaks	Defines as those that have the potential to have an adverse impact on the quality of stormwater discharges from the site. Such spills and leaks may include but are not limited to, releases of oil or hazardous substances in excess of quantities that are reportable under CWA Section 311 (see 40 CFR 110.6 and 40 CFR 117.21) or Section 102 of the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA), 42 USC §9602 and A.R.S. §49-284. This permit does not relieve the permittee of the reporting requirements of 40 CFR 110, 40 CFR 117, and 40 CFR 302 relating to spills or other releases of oils or hazardous substances.
Single Concentration Acute Test	A statistical analysis comparing only two sets of replicate observations. In the case of WET, comparing only two test concentrations (e.g., a control and 100% effluent). The purpose of this test is to determine if the 100% effluent concentration differs from the control (i.e., the test passes or fails).
Site	The land or water where any "facility or activity" is physically located or conducted, including adjacent land used in connection with the facility or activity.
Spill	The release of a hazardous or toxic substance from its container or containment.
Stormwater	Stormwater runoff, snow melt runoff, and surface runoff and drainage. See 40 CFR 122.26(b)(13) & A.A.C. R18-9-A901(36).

Storm Resistant Shelter	A building or structure that is completely roofed and walled, or a structure with only a top cover but no side coverings, provided that any material or industrial activity located under or within the structure is not subject to any run-on and subsequent runoff of stormwater, or mobilization by wind.
Stormwater Discharges Associated with Industrial Activity	The discharge from any conveyance that is used for collecting and conveying stormwater and that is directly related to manufacturing, processing, or raw materials storage areas at an industrial plant. The term does not include discharges from facilities or activities excluded from the AZPDES program under Part 122. For the categories of industries identified in this section, the term includes, but is not limited to, stormwater discharges from industrial plant yards; immediate access roads and rail lines used or traveled by carriers of raw materials, manufactured products, waste material, or by-products used or created by the facility; material handling sites; refuse sites; sites used for the application or disposal of process waste waters (as defined at part 401 of this chapter); sites used for the storage and maintenance of material handling equipment; sites used for residual treatment, storage, or disposal; shipping and receiving areas; manufacturing buildings; storage areas (including tank farms) for raw materials, and intermediate and final products; and areas where industrial activity has taken place in the past and significant materials remain and are exposed to stormwater. For the purposes of this paragraph, material handling activities include storage, loading and unloading, transportation, or conveyance of any raw material, intermediate product, final product, by-product or waste product. The term excludes areas located at industrial sites that are separate from the facility's industrial activities, such as office buildings and accompanying parking lots as long as the drainage from the excluded areas is not mixed with stormwater drained from the above described areas. Industrial facilities include those that are federally, State, or municipally owned or operated that meet the description of the facilities listed in 40 CFR 122.26(b)(14). The term also includes those facilities designated under the provisions of 40 CFR 122.26(a)(1)(v). See 40 CFR 122.26(b)(14).
Storm Event	A precipitation event that results in a measurable amount of precipitation.
Stormwater Pollution Prevention Team	The group of individuals, identified by name, title or role, that are responsible for the development and modifications of the SWPPP and oversight of compliance with the permit requirements. The Stormwater Team is also responsible for maintaining control measures and taking corrective actions where required. The team may include members who are not employed by the site (such as third-party consultants). The individuals on the "Stormwater Pollution Prevention Team" shall be identified in the SWPPP.
Structural Controls	Physical or constructed features, such as silt fencing, sediment traps, and detention/retention ponds that minimize the discharge of pollutants.
Submit	As used in this permit, means post-marked, documented by other mailing receipt, sent electronically, or hand-delivered to ADEQ.
Surface Water Quality Standards	Surface Water Quality Standards means a standard adopted for a protected surface water pursuant to Section 49-221 and, in the case of WOTUS, pursuant to Section 49-222.

Test Acceptability Criteria (TAC)	Specific criteria for determining whether toxicity tests results are acceptable. The effluent and reference toxicant must meet specific criteria as defined in the test method.
Total Maximum Daily Loads (TMDLs)	Total Maximum Daily Loads (TMDLs) is an estimation of the total amount of a pollutant from all sources that may be added to a water, while still allowing the water to achieve and maintain applicable surface water quality standards. Each total maximum daily load shall include allocations for sources that contribute the pollutant to the water. Total Maximum Daily Loads for waters of the U.S. shall meet the requirements of section 303(d) of the Clean Water Act (33 USC 1313(d)) and regulations implementing that statute to achieve applicable surface water quality standards.
Total Nitrogen	The sum of the nitrogen component from ammonia (NH ₃), ammonium ion (NH ₄ ⁺), nitrite (NO ₂), nitrate (NO ₃), and dissolved and particulate organic nitrogen expressed as elemental nitrogen.
Toxic Unit (TU)	A measure of toxicity in an effluent as determined by the acute toxicity units or chronic toxicity units measured. Higher the TUs indicate greater toxicity.
Toxicity Identification Evaluation (TIE)	A set of procedures used to identify the specific chemical(s) causing effluent toxicity.
Toxicity Reduction Evaluation (TRE)	A site-specific study conducted in a stepwise process designed to identify the causative agents of effluent toxicity, isolate the sources of toxicity, evaluate the effectiveness of toxicity control options, and then confirm the reduction in effluent toxicity.
Toxicity Test	A procedure to determine the toxicity of a chemical or an effluent using living organisms. A toxicity test measures the degree of effect of a specific chemical or effluent on exposed test organisms.
Upset	An exceptional incident in which there is unintentional and temporary noncompliance with technology-based permit effluent limitations because of factors beyond your reasonable control. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper operation. See 40 CFR 122.41(n)(1).
Waters of the United States (WOTUS)	Waters of the United States (WOTUS) means protected surface waters that are also navigable waters as defined by Section 502(7) of the Clean Water Act.
WOTUS Protected Surface Water	WOTUS protected surface water- means a protected surface water that is a WOTUS.
Whole Effluent Toxicity	The total toxic effect of an effluent measured directly with a toxicity test.

Appendix B. AZPDES Discharge Flow Record

SRP Kyrene – AZ0024791			
Discharge to Salt River to Middle Gila Basin At:			
Outfall No:	Outfall 001		
Location:	Latitude 33° 21' 45" N, Longitude 33° 21' 45" N		
Month:		Year:	
Date:	Flow Duration ⁽¹⁾ (Total hours per day)	Flow Rate ⁽²⁾ (Total MGD per day)	
1			
2			
3			
4			
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6			
7			
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31			
Comment:			

Footnotes

- 1 Total time of discharge in hours per day. If actual time is not available, use an estimate of flow duration.
- 2 Report flow discharge in MGD. If no discharge occurs on any given day, report 'ND' for the flow for that day.

SRP Kyrene – AZ0024791			
Discharge to Gila Drain to Middle Gila Basin At:			
Outfall No:	002		
Location:	Latitude 33° 19' 06" N, Longitude 111° 56' 01" W		
Month:		Year:	
Date:	Flow Duration ⁽¹⁾ (Total hours per day)	Flow Rate ⁽²⁾ (Total MGD per day)	
1			
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4			
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Comment:			

Footnotes

- 1 Total time of discharge in hours per day. If actual time is not available, use an estimate of flow duration.
- 2 Report flow discharge in MGD. If no discharge occurs on any given day, report 'ND' for the flow for that day.

SRP Kyrene – AZ0024791			
Discharge to Kyrene Branch Lateral to Middle Gila Basin At:			
Outfall No:	003		
Location:	Latitude 33° 21' 33" N, Longitude 111° 56' 17" W		
Month:		Year:	
Date:	Flow Duration ⁽¹⁾ (Total hours per day)	Flow Rate ⁽²⁾ (Total MGD per day)	
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Comment:			

Footnotes

- 1 Total time of discharge in hours per day. If actual time is not available, use an estimate of flow duration.
- 2 Report flow discharge in MGD. If no discharge occurs on any given day, report 'ND' for the flow for that day.

SRP Kyrene – AZ0024791			
Discharge to Kyrene Branch Lateral to Middle Gila Basin At:			
Outfall No:	007		
Location:	Latitude 33° 21' 24" N, Longitude 111° 56' 7" W		
Month:		Year:	
Date:	Flow Duration ⁽¹⁾ (Total hours per day)	Flow Rate ⁽²⁾ (Total MGD per day)	
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Comment:			

Footnotes

- 1 Total time of discharge in hours per day. If actual time is not available, use an estimate of flow duration.
- 2 Report flow discharge in MGD. If no discharge occurs on any given day, report 'ND' for the flow for that day.

SRP Kyrene – AZ0024791			
Discharge to Western Canal to Middle Gila Basin At:			
Outfall No:	012		
Location:	Latitude 33° 21' 24" N, Longitude 111° 56' 7" W		
Month:		Year:	
Date:	Flow Duration ⁽¹⁾ (Total hours per day)	Flow Rate ⁽²⁾ (Total MGD per day)	
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Comment:			

Footnotes

- 1 Total time of discharge in hours per day. If actual time is not available, use an estimate of flow duration.
- 2 Report flow discharge in MGD. If no discharge occurs on any given day, report 'ND' for the flow for that day.

SRP Kyrene – AZ0024791			
Discharge to Western Canal to Middle Gila Basin At: Latitude 33° 21' 24" N, Longitude 111° 56' 7" W			
Outfall No:	012		
Location:			
Month:		Year:	
Date:	Flow Duration ⁽¹⁾ (Total hours per day)	Flow Rate ⁽²⁾ (Total MGD per day)	
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			
11			
12			
13			
14			
15			
16			
17			
18			
19			
20			
21			
22			
23			
24			
25			
26			
27			
28			
29			
30			
31			
Comment:			

Footnotes

- 1 Total time of discharge in hours per day. If actual time is not available, use an estimate of flow duration.
- 2 Report flow discharge in MGD. If no discharge occurs on any given day, report 'ND' for the flow for that day.

[illegible]

Appendix C. Continued—Ammonia Special Reporting Requirements

Arizona Administrative Code, Title 18, Chapter 11 Department of Environmental Quality Water Quality Standards contains acute and chronic ammonia standards that are contingent upon temperature and/or pH values. The chronic criteria are more stringent than the acute ammonia criteria, so the effluent ammonia will be compared to the chronic ammonia standards. The table for chronic Aquatic and Wildlife designated use follow below. The permittee shall refer to this table to determine the ammonia standard that applies each time an ammonia sample is taken. The required minimum discharge sampling frequency for these parameters may be found in Table 1 or 2 of this permit. The permittee shall record all sampling results for effluent ammonia, effluent pH and temperature at the time of sampling, as well as the applicable ammonia standards, ammonia impact ratios, and sampling dates in the Ammonia Data Log. Additionally, the ammonia impact ratio shall be calculated by dividing the ammonia value by the corresponding ammonia standard. Anytime an ammonia impact ratio is found to be above the limit of 1.0 for the pH and temperature at the time the sample was taken, the permittee shall highlight this on the ammonia data log. These results shall also be reported on DMRs with any exceedances noted. Annual submittal of the ammonia data log is required (See Part II.B.3)

A&W Designated Uses

Determination of Chronic Total Ammonia Criteria as N in mg / L Based on pH and Temperature at Time of Sampling (1) (2)										
pH	Temperature, °C									
	0	14	16	18	20	22	24	26	28	30
6.5	6.7	6.7	6.1	5.3	4.7	4.1	3.6	3.2	2.8	2.5
6.6	6.6	6.6	6.0	5.3	4.6	4.1	3.6	3.1	2.8	2.4
6.7	6.4	6.4	5.9	5.2	4.5	4.0	3.5	3.1	2.7	2.4
6.8	6.3	6.3	5.7	5.0	4.4	3.9	3.4	3.0	2.6	2.3
6.9	6.1	6.1	5.6	4.9	4.3	3.8	3.3	2.9	2.6	2.3
7.0	5.9	5.9	5.4	4.7	4.2	3.7	3.2	2.8	2.5	2.2
7.1	5.7	5.7	5.2	4.5	4.0	3.5	3.1	2.7	2.4	2.1
7.2	5.4	5.4	5.0	4.3	3.8	3.3	2.9	2.6	2.3	2.0
7.3	5.1	5.1	4.6	4.1	3.6	3.1	2.8	2.4	2.1	1.9
7.4	4.7	4.8	4.3	3.8	3.3	3.0	2.6	2.3	2.0	1.7
7.5	4.4	4.4	4.0	3.5	3.1	2.7	2.4	2.1	1.8	1.6
7.6	4.0	4.0	3.6	3.2	2.8	2.5	2.2	1.9	1.7	1.5
7.7	3.6	3.6	3.3	2.9	2.5	2.2	1.9	1.7	1.5	1.3
7.8	3.2	3.2	2.9	2.5	2.2	2.0	1.7	1.5	1.3	1.2
7.9	2.8	2.8	2.5	2.2	2.0	1.7	1.5	1.3	1.2	1.0
8.0	2.4	2.4	2.2	1.9	1.7	1.5	1.3	1.2	1.0	0.90
8.1	2.1	2.1	1.9	1.7	1.5	1.3	1.1	1.0	0.88	0.77
8.2	1.8	1.8	1.6	1.4	1.3	1.1	0.97	0.86	0.75	0.66
8.3	1.5	1.5	1.4	1.2	1.1	0.94	0.83	0.73	0.64	0.56

Determination of Chronic Total Ammonia Criteria as N in mg / L Based on pH and Temperature at Time of Sampling (1) (2)										
pH	Temperature, °C									
	0	14	16	18	20	22	24	26	28	30
8.4	1.3	1.3	1.2	1.0	0.91	0.80	0.70	0.62	0.54	0.48
8.5	1.1	1.1	0.99	0.87	0.77	0.67	0.59	0.52	0.46	0.40
8.6	0.92	0.92	0.84	0.74	0.65	0.57	0.50	0.44	0.39	0.34
8.7	0.78	0.78	0.71	0.62	0.55	0.48	0.42	0.37	0.33	0.29
8.8	0.66	0.66	0.60	0.53	0.46	0.41	0.36	0.32	0.28	0.24
8.9	0.57	0.57	0.51	0.45	0.40	0.35	0.31	0.27	0.24	0.21
9.0	0.49	0.49	0.44	0.39	0.34	0.30	0.26	0.23	0.20	0.18

Footnotes

- 1 pH and temperature are field measurements taken at the same time and location as the water samples destined for the laboratory analysis of ammonia.
- 2 If field measured pH and/or temperature values fall between the Chronic Total Ammonia tabular values, round field measured values according to standard scientific rounding procedures to nearest tabular value to determine the ammonia standard.

Appendix D. Standard AZPDES Permit Conditions & Notifications

(Updated as of February 2, 2004)

1. Duty to Reapply—[R18-9-B904(B)]

Unless the Permittee permanently ceases the discharging activity covered by this permit, the Permittee shall reapply, submit a new application, 180 days before the existing permit expires. ADEQ must receive the new application at least 180 days before permit expiration in order to start the re-application process.
2. Applications—[R18-9-A905(A)(1)(C) which incorporates 40CFR 122.22]
 - a. All applications shall be signed as follows:
 - i. For a corporation: by a responsible corporate officer. For the purpose of this section, a responsible corporate officer means:
 - A. A president, secretary, treasure, or vice-president of the corporation in charge of a principle business function, or any other person who performs similar policy-or decision-making functions for the corporation, or
 - B. The manager of one or more manufacturing, production, or operating facilities, provided, the manager is authorized to make management decisions which govern the operation of the regulated facility including having the explicit or implicit duty of making major capital investment recommendations, and initiating and directing other comprehensive measures to assure long term environmental compliance with environmental laws and regulations; the manager can ensure that the necessary systems are established or actions taken to gather complete and accurate information for permit application requirements; and where authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures;
 - ii. For partnership or sole proprietorship: by a general partner or the proprietor, respectively; or
 - iii. For a municipality, State, Federal, or other public agency: By either a principal executive officer or ranking elected official. For purposes of this section, a principal executive officer of a Federal agency includes: (i) The chief executive officer having responsibility for the overall operations of a principal geographic unit of the agency (e.g., Regional Administrators of EPA).
 - b. All reports required by permits and other information requested by the Director shall be signed by a person described in paragraph (a) of this Section, or by a duly authorized representative of that person. A person is a duly authorized representative only if:
 - i. The authorization is made in writing by a person described in paragraph (a) of this section;
 - ii. The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility, such as the position of plant manager, operator of a well or a well field, superintendent, position of equivalent responsibility, or an individual or position having overall responsibility for environmental matters for the company. (A duly authorized representative may thus be either a named individual or any individual occupying a named position.) and,
 - iii. The written authorization is submitted to the Director.
 - c. Changes to Authorization. If an authorization under paragraph (b) of this section is no longer accurate because a different individual or position has responsibility for the overall operation of the facility, a new authorization satisfying the requirements of paragraph (b) of this section must be submitted to the Director prior to or together with any reports, information, or applications to be signed by an authorized representative.

- d. Certification. Any person signing a document under paragraph (a) or (b) of this section shall make the following certification:

I certify under penalty of law, that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

3. Duty to Comply - [R18-9-A905(A)(3)(a) which incorporates 40 CFR 122.41(a)(i) and A.R.S. §49- 262, 263.01, and 263.02.]

a.

The Permittee shall comply with all conditions of this permit and any standard and prohibition required under A.R.S. Title 49, Chapter 2, Article 3.1 and A.A.C. Title 18, Chapter 9, Articles 9 and 10. For discharges to a WOTUS, any permit noncompliance constitutes a violation of the Clean Water Act; A.R.S. Title 49, Chapter 2, Article 3.1; and A.A.C. Title 18, Chapter 9, Articles 9 and 10, and is grounds for enforcement action, permit termination, revocation and reissuance, or modification, or denial of a permit renewal application.

- b. The issuance of this permit does not waive any federal, state, county, or local regulations or permit requirements with which a person discharging under this permit is required to comply.

- c. The Permittee shall comply with the effluent standards or prohibitions established under section 307(a) of the Clean Water Act for toxic pollutants and with standards for sewage sludge use or disposal established under section 405(d) of the Clean Water Act within the time provided in the regulation that establish these standards or prohibitions, even if the permit has not yet been modified to incorporate the requirement.

- d. Civil Penalties. A.R.S. § 49-262(C) provides that any person who violates any provision of A.R.S. Title 49, Chapter 2, Article 3.1 or a rule, permit, discharge limitation or order issued or adopted under A.R.S. Title 49, Chapter 2, Article 3.1 is subject to a civil penalty not to exceed \$25,000 per day per violation.

- e. Criminal Penalties. Any a person who violates a condition of this permit, or violates a provision under A.R.S. Title 49, Chapter 2, Article 3.1, or A.A.C. Title 18, Chapter 9, Articles 9 and 10 is subject to the enforcement actions established under A.R.S. Title 49, Chapter 2, Article 4, which may include the possibility of fines and/or imprisonment.

4. Need to Halt or Reduce Activity Not a Defense - [R18-9-A905(A)(3)(a) which incorporates 40 CFR 122.41(c)]

It shall not be a defense for a Permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.

5. Duty to Mitigate - R18-9-A905(A)(3)(a) which incorporates 40 CFR 122.41(d)]

The Permittee shall take all reasonable steps to minimize or prevent any discharge or sludge use or disposal in violation of this permit which has a reasonable likelihood of adversely affecting human health or the environment.

6. Proper Operation and Maintenance - [R18-9-A905(A)(3)(a) which incorporates 40 CFR 122.41(e)]

The Permittee shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the Permittee to achieve compliance with the conditions of this permit. Proper operation and maintenance also includes adequate laboratory controls and appropriate quality assurance procedures. This provision requires the operation of back-up or auxiliary facilities or similar systems which are installed by a Permittee only when the operation is necessary to achieve compliance with the conditions of the permit.

7. Permit Actions - [R18-9-A905(A)(3)(a) which incorporates 40 CFR 122.41(f)]

This permit may be modified, revoked and reissued, or terminated for cause. The filing of a request by the Permittee for a permit modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance does not stay any permit condition.

8. Property Rights - [R18-9-A905(A)(3)(a) which incorporates 40 CFR 122.41(g)]

This permit does not convey any property rights of any sort, or any exclusive privilege.

9. Duty to Provide Information - [R18-9-A905(A)(3)(a) which incorporates 40 CFR 122.41(h)]

The Permittee shall furnish to the Director, within a reasonable time, any information which the Director may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit or to determine compliance with this permit. The Permittee shall also furnish to the Director upon request, copies of records required to be kept by this permit.

10. Inspection and Entry [R18-9-A905(A)(3)(a) which incorporates 40 CFR 122.41(i)]

The Permittee shall allow the Director, or an authorized representative, upon the presentation of credentials and such other documents as may be required by law, to:

- a. Enter upon the Permittee's premises where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of this permit;
- b. Have access to and copy, at reasonable times, any records that must be kept under the terms of the permit;
- c. Inspect at reasonable times any facilities, equipment (including monitoring equipment or control equipment), practices or operations regulated or required under this permit; and
- d. Sample or monitor at reasonable times, for the purposes of assuring permit compliance or as otherwise authorized by A.R.S. Title 49, Chapter 2, Article 3.1, and A.A.C. Title 18, Chapter 9, Articles 9 and 10, any substances or parameters at any location

11. Monitoring and Records - [R18-9-A905(A)(3)(a) which incorporates 40 CFR 122.41(j)]

- a. Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity.
- b. The Permittee shall retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by this permit, and records of all data used to complete the application for this permit, for a period of at least 3 years from the date of the sample, measurement, report or application, except for records of monitoring information required by this permit related to the Permittee's sewage sludge use and disposal activities, which shall be retained for a period of at least five years (or longer as required by 40 CFR Part 503). This period may be extended by request of the Director at any time.
- c. Records of monitoring information shall include:
 - i. The date, exact place and time of sampling or measurements;
 - ii. The individual(s) who performed the sampling or measurements;
 - iii. The date(s) the analyses were performed;
 - iv. The individual(s) who performed the analyses;
 - v. The analytical techniques or methods used; and
 - vi. The results of such analyses.

- d. Monitoring must be conducted according to test procedures specified in this permit. If a test procedure is not specified in the permit, then monitoring must be conducted according to test procedures approved under A.A.C. R18-9-A905(B) including those under 40 CFR Part 136 unless otherwise specified in 40 CFR Part 503 (for sludge).
- e. The Clean Water Act provides that any person who falsifies, tampers with, or knowingly renders inaccurate any monitoring device or method required to be maintained in this permit shall, upon conviction, be punished by a fine of not more than \$10,000 per violation, or by imprisonment for not more than two years per violation, or by both for first conviction. For a second conviction, such a person is subject to a fine of not more than \$20,000 per day of violation, or imprisonment for not more than four years, or both.

Any person who falsifies, tampers with, or knowingly renders inaccurate any monitoring device or method required to be maintained in this permit is subject to the enforcement actions established under A.R.S. Title 49, Chapter 2, Article 4, which includes the possibility of fines and/or imprisonment.

12. Signatory Requirement - [R18-9-A905(A)(3)(a) which incorporates 40 CFR 122.41(k)]

- a. All applications, reports, or information submitted to the Director shall be signed and certified. (See 40 CFR 122.22 incorporated at R18-9-A905(A)(1)(c))
- b. The CLEAN WATER ACT provides that any person who knowingly makes any false statement, representation, or certification in any record or other document submitted or required to be maintained under this permit, including monitoring reports or reports of compliance or non-compliance shall, upon conviction, be punished by a fine of not more than \$10,000 per violation, or by imprisonment for not more than two years per violation, or by both for a first conviction. For a second conviction, such a person is subject to a fine of not more than \$20,000 per day of violation, or imprisonment of not more than four years, or both.

13. Reporting Requirements - [R18-9-A905(A)(3)(a) which incorporates 40 CFR 122.41(l)]

- a. Planned changes. The Permittee shall give notice to the Director as soon as possible of any planned physical alterations of additions to the permitted facility. Notice is required only when:
 - i. The alteration or addition to a permitted facility that discharges to a WOTUS, may meet one of the criteria for determining whether a facility is a new source in 40 CFR 122.29(b) (incorporated by reference at R18-9-A905(A)(1)(e)); or
 - ii. The alteration or addition could significantly change the nature or increase the quantity of pollutants discharged. This notification applies to pollutants which are subject neither to effluent limitations in the permit, nor to notification requirements under 40 CFR 122.42(a)(1) (incorporated by reference at R18-9-A905(A)(3)(b)).
 - iii. The alteration or addition results in a significant change in the Permittee's sludge use or disposal practices, and such alteration, addition, or change may justify the application of permit conditions that are different from or absent in the existing permit including notification of additional use or disposal sites not reported during the permit application process or not reported pursuant to an approved land application plan.
- b. Anticipated noncompliance. The Permittee shall give advance notice to the Director of any planned changes in the permitted facility or activity which may result in noncompliance with permit requirements.
- c. Transfers. (R18-9-B905) This permit is not transferable to any person except after notice to the Director. The Director may require modification or revocation and reissuance of the permit to change the name of the Permittee and incorporate such other requirements as may be necessary under Arizona Revised Statutes and the Clean Water Act.
- d. Monitoring reports. Monitoring results shall be reported at the intervals specified elsewhere in this permit.

- i. Monitoring results must be reported on a Discharge Monitoring Report (DMR) or forms provided or specified by the Director for reporting results of monitoring of sludge use or disposal practices.
 - ii. If the Permittee monitors any pollutant more frequently than required by the permit, then the results of this monitoring shall be included in the calculation and reporting of the data submitted in the DMR, or sludge reporting form specified by the Director.
 - iii. Calculations for all limitations which require averaging of measurements shall utilize an arithmetic mean unless otherwise specified by the Director in the permit.
 - e. Compliance schedules. Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule of this permit shall be submitted no later than 14 days following each schedule date.
 - f. Twenty-four hour reporting.
 - i. The Permittee shall report any noncompliance which may endanger human health or the environment. Any information shall be provided orally within 24 hours from the time the Permittee becomes aware of the circumstances. A written submission shall also be provided within five days of the time the Permittee becomes aware of the circumstances. The written submission shall contain a description of the noncompliance and its cause; the period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent recurrence of the noncompliance.
 - ii. The following shall be included as information which must be reported within 24 hours under this paragraph.
 - A. Any unanticipated bypass which exceeds any effluent limitation in the permit. (See 40 CFR 122.41(g) which is incorporated by reference at R18-9-A905(A)(3)(a)).
 - B. Any upset which exceeds any effluent limitation in the permit.
 - C. Violation of a maximum daily discharge limitation for any of the pollutants listed by the Director in the permit to be reported within 24 hours. (See 40 CFR 122.44(g) which is incorporated by reference at R18-9-A905(A)(3)(d)).
 - g. Other noncompliance. The Permittee shall report all instances of noncompliance not reported under paragraphs (d), (e), and (f) of this section, at the time monitoring reports are submitted. The reports shall contain the information listed in paragraph (f) of this section.
 - h. Other information. Where the Permittee becomes aware that it failed to submit any relevant facts in a permit application, or submitted incorrect information in a permit application or in any report to the Director, it shall promptly submit such facts or information.
14. Bypass - [R18-9-A905(A)(3)(a) which incorporates 40 CFR 122.41(m)]
- a. Definitions
 - i. "Bypass" means the intentional diversion of waste streams from any portion of a treatment facility.
 - ii. "Severe property damage" means substantial physical damage to property, damage to the treatment facilities which causes them to become inoperable, or substantial and permanent loss of natural resources which can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production.

- b. Bypass not exceeding limitations. The Permittee may allow any bypass to occur which does not cause effluent limitations to be exceeded, but only if it also is for essential maintenance to assure efficient operation. These bypasses are not subject to the provision of paragraphs (c) and (d) of this section.
 - c. Notice.
 - i. Anticipated bypass. If the Permittee knows in advance of the need for a bypass, it shall submit prior notice, if possible at least ten days before the date of bypass.
 - ii. Unanticipated bypass. The Permittee shall submit notice of an unanticipated bypass as required in paragraph (f)(2) of section 13 (24-hour notice).
 - d. Prohibition of bypass.
 - i. Bypass is prohibited, and the Director may take enforcement action against a Permittee for bypass, unless:
 - A. Bypass was unavoidable to prevent loss of life, personal injury, or severe property damage;
 - B. There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment down time. This condition is not satisfied if adequate back-up equipment should have been installed in the exercise of reasonable engineering judgement to prevent a bypass which occurred during normal periods of equipment downtime or preventive maintenance; and
 - C. The Permittee submitted notices as required under paragraph (c) of this section.
 - ii. The Director may approve an anticipated bypass, after considering its adverse effects, if the Director determines that it will meet the three conditions listed above in paragraph (d)(1) of this section.
15. Upset - [A.R.S.§§49-255(8) and 255.01(E), R18-9-A905(A)(3)(a) which incorporates 40 CFR 122.41(n)]
- a. Definition. "Upset" means an exceptional incident in which there is unintentional and temporary noncompliance with technology-based permit effluent limitations because of factors beyond the reasonable control of the Permittee. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventative maintenance, or careless or improper operation.
 - b. Effect of an upset. An upset constitutes an affirmative defense to an action brought for noncompliance with such technology-based permit effluent limitations if the requirements of paragraph (c) of this section are met. No determination made during administrative review of claims that noncompliance was caused by upset, and before an action for noncompliance, is final administrative action subject to judicial review.
 - c. Conditions necessary for a demonstration of upset. A Permittee who wishes to establish the affirmative defenses of upset shall demonstrate, through properly signed, contemporaneous operating logs, or other relevant evidence that:
 - i. An upset occurred and that the Permittee can identify the cause(s) of the upset;
 - ii. The permitted facility was at the time being properly operated; and
 - iii. The Permittee submitted notice of the upset as required in paragraph (f)(2) of Section 13 (24-hour notice).
 - iv. The Permittee has taken appropriate measure including all reasonable steps to minimize or prevent any discharge or sewage sludge use or disposal that is in violation of the permit and that has a reasonable likelihood of adversely affecting human health or the environment per A.R.S. § 49-255.01(E)(1)(d).

- d. Burden of proof. In any enforcement proceeding the Permittee seeking to establish the occurrence of an upset has the burden of proof.

16. Existing Manufacturing, Commercial, Mining, and Silvicultural Dischargers - [R18-9-A905(A)(3)(b) which incorporates 40 CFR 122.42(a)]

In addition to the reporting requirements under 40 CFR 122.41(l) (which is incorporated at R18-9-A905(A)(3)(a)), all existing manufacturing, commercial, mining, and silvicultural dischargers must notify the Director as soon as they know or have reason to believe:

- a. That any activity has occurred or will occur which would result in the discharge, on a routine or frequent basis, of any toxic pollutant which is not limited in the permit, if that discharge will exceed the highest of the following "notification levels":
 - i. One hundred micrograms per liter (100 µg/l);
 - ii. hundred micrograms per liter (200 µg/l) for acrolein and acrylonitrile; five hundred micrograms per liter (500 µg/l) for 2,4-dinitrophenol and for 2-methyl-4,6-dinitrophenol; and one milligram per liter (1 mg/l) for antimony;
 - iii. Five times the maximum concentration value reported for that pollutant in the permit application in accordance with 40 CFR 122.21(g)(7) (which is incorporated at R18-9-A905(A)(1)(b)); or
 - iv. The level established by the Director in accordance with 40 CFR 122.44(f) (which is incorporated at R18-9-A905(A)(3)(d)).
- b. That any activity has occurred or will occur which would result in any discharge, on a nonroutine or infrequent basis, of a toxic pollutant which is not limited in the permit, if that discharge will exceed the highest of the following "notification levels":
 - i. Five hundred micrograms per liter (500 µg/l);
 - ii. One milligram per liter (1 mg/l) for antimony;
 - iii. Ten (10) times the maximum concentration value reported for that pollutant in the permit application in accordance with 40 CFR 122.21(g)(7)(which is incorporated at R18-9-A905(A)(1)(b));
 - iv. The level established by the Director in accordance with 40 CFR 122.44(f) (which is incorporated at R18-9-A905(A)(3)(d)).

17. Publicly Owned Treatment Works - [R18-9-A905(A)(3)(b) which incorporates 40 CFR 122.42(b)]

This section applies only to publicly owned treatment works as defined at ARS § 49-255(5).

- a. All POTW's must provide adequate notice to the Director of the following:
 - i. Any new introduction of pollutants into the POTW from an indirect discharger which would be subject to section 301 or 306 of the CLEAN WATER ACT if it were directly discharging those pollutants; and
 - ii. Any substantial change in the volume or character of pollutants being introduced into that POTW by a source introducing pollutants into the POTW at the time of issuance of the permit.
 - iii. For the purposes of this paragraph, adequate notice shall include information on (i) the quality and quantity of effluent introduced into the POTW, and (ii) any anticipated impact of the change on the quantity or quality of effluent to be discharge from the POTW.

Publicly owned treatment works may not receive hazardous waste by truck, rail, or dedicated pipe except as provided under 40 CFR 270. Hazardous wastes are defined at 40 CFR 261 and include any mixture containing any waste listed under 40 CFR 261.31 - 261.33. The Domestic Sewage Exclusion (40 CFR 261.4) applies only to wastes mixed with domestic sewage in a sewer leading to a publicly owned

treatment works and not to mixtures of hazardous wastes and sewage or septage delivered to the treatment plant by truck.

18. Reopener Clause - [R18-9-A905(A)(3)(d) which incorporates 40 CFR 122.44(c)]

This permit shall be modified or revoked and reissued to incorporate any applicable effluent standard or limitation or standard for sewage sludge use or disposal under sections 301(b)(2)(C), and (D), 304(b)(2), 307(a)(2) and 405(d) which is promulgated or approved after the permit is issued if that effluent or sludge standard or limitation is more stringent than any effluent limitation in the permit, or controls a pollutant or sludge use or disposal practice not limited in the permit.

19. Privately Owned Treatment Works - [R18-9-A905(A)(3)(d) which incorporates 40 CFR 122.44]

This section applies only to privately owned treatment works as defined at 40 CFR 122.2.

- a. Materials authorized to be disposed of into the privately owned treatment works and collection system are typical domestic sewage. Unauthorized materials are hazardous waste (as defined at 40 CFR Part 261), motor oil, gasoline, paints, varnishes, solvents, pesticides, fertilizers, industrial wastes, or other materials not generally associated with toilet flushing or personal hygiene, laundry, or food preparation, unless specifically listed under "Authorized Non-domestic Sewer Dischargers" elsewhere in this permit.
- b. It is the Permittee's responsibility to inform users of the privately owned treatment works and collection system of the prohibition against unauthorized materials and to ensure compliance with the prohibition. The Permittee must have the authority and capability to sample all discharges to the collection system, including any from septic haulers or other unsewered dischargers, and shall take and analyze such samples for conventional, toxic, or hazardous pollutants when instructed by the permitting authority. The Permittee must provide adequate security to prevent unauthorized discharges to the collection system.
- c. Should a user of the privately owned treatment works desire authorization to discharge non-domestic wastes, the Permittee shall submit a request for permit modification and an application, pursuant to 40 CFR 122.44(m), describing the proposed discharge. The application shall, to the extent possible, be submitted using ADEQ Forms 1 and 2C, unless another format is requested by the permitting authority. If the privately owned treatment works or collection system user is different from the Permittee, and the Permittee agrees to allow the non-domestic discharge, the user shall submit the application and the Permittee shall submit the permit modification request. The application and request for modification shall be submitted at least 6 months before authorization to discharge non-domestic wastes to the privately owned treatment works or collection system is desired.

20. Transfers by Modification - [R18-9-B905]

Except as provided in section 21, a permit may be transferred by the Permittee to a new owner or operator only if the permit has been modified or revoked and reissued, or a minor modification made under R18-9-B906, to identify the new Permittee and incorporate such other requirements as may be necessary.

21. Automatic Transfers [R18-9-B905]

An alternative to transfers under section 20, any AZPDES permit may be automatically transferred to a new Permittee if:

- a. The current Permittee notifies the Director at least 30 days in advance of the proposed transfer date;
- b. The notice includes a written agreement between the existing and new Permittee containing a specific date for transfer of permit responsibility, coverage, and liability between them; and
- c. The Director does not notify the existing Permittee and the proposed new Permittee of his or her intent to modify or revoke and reissue the permit. A modification under this subparagraph may also be a minor modification under R18-9-B906(B).

22. Minor Modification of Permits [R18-9-B906(B)]

Upon the consent of the Permittee, the Director may modify a permit to make the corrections or allowances for changes in the permitted activity listed in this section, without following public notice procedures under R18-9-A907 or A908. Minor modifications may only:

- a. Correct typographical errors;
- b. Update a permit condition that changed as a result of updating an Arizona water quality standard;
- c. Require more frequent monitoring or reporting by the Permittee;
- d. Change an interim compliance date in a schedule of compliance, provided the new date is not more than 120 days after the date specified in the existing permit and does not interfere with attainment of the final compliance date requirement;
- e. Allow for a change in ownership or operational control of a facility where the Director determines that no other change in their permit is necessary, provided that a written agreement containing a specific date for transfer of permit responsibility, coverage, and liability between the current and new Permittee has been submitted to the Director.
- f. Change the construction schedule for a discharger that discharges to a WOTUS which is a new source. No such change shall affect a discharger's obligation prior to discharge under 40 CFR 122.29 (which is incorporated by reference in R18-9-A905(A)(1)(e)).
- g. Delete a point source outfall when the discharge from that outfall is terminated and does not result in discharge of pollutants from other outfalls except in accordance with the permit limits.
- h. Incorporate conditions of a POTW pretreatment program that has been approved in accordance with the procedures in 40 CFR 403.11 and 403.18 as enforceable conditions of the POTW's permit.
- i. Annex an area by a municipality.

23. Termination of Permits - [R-9-B906(C)]

The following are causes for terminating a permit during its term, or for denying a permit renewal application:

- a. Noncompliance by the Permittee with any condition of the permit;
- b. The Permittee's failure in the application or during the permit issuance process to disclose fully all relevant facts, or the Permittee's misrepresentation of any relevant facts at any time;
- c. A determination that the permitted activity endangers human health or the environment and can only be regulated to acceptable levels by permit modification or termination; or
- d. A change in any condition that requires either a temporary or a permanent reduction or elimination of any discharge controlled by the permit (for example, a plant closure or termination of discharge by connection to a POTW).

24. Availability of Reports - [Pursuant to A.R.S. § 49-205]

Except for data determined to be confidential under A.R.S. § 49-205(A), all reports prepared in accordance with the terms of this permit shall be available for public inspection at ADEQ offices. As required by A.R.S. § 49-205(B) and (C), permit applications, permits, and effluent data shall not be considered confidential.

25. Removed Substances - [Pursuant to Clean Water Act Section 301]

Solids, sludges, filter backwash, or other pollutants removed in the course of treatment or control of wastewaters shall be disposed of in a manner such as to prevent any pollutant from such materials from entering navigable waters.

26. Severability - [Pursuant to A.R.S. § 49-324(E)]

The provisions of this permit are severable, and if any provision of this permit, or the application of any provision of this permit to any circumstance, is held invalid, the application of such provision to other circumstances, and remainder of this permit, shall not be affected thereby.

27. Civil and Criminal Liability - [Pursuant to A.R.S. § 49-262, 263.01, and 263.02]

Except as provided in permit conditions on "Bypass" (Section 14) and "Upset" (Section 15), nothing in this permit shall be construed to relieve the Permittee from civil or criminal penalties for noncompliance.

28. Oil and Hazardous Substance Liability - [Pursuant to Clean Water Act Section 311].

Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the operator from any responsibilities, liabilities, or penalties established pursuant to any applicable State or Tribal law or regulation under authority preserved by Section 510 of the Clean Water Act.

29. State or Tribal Law - [Pursuant to R 18-9-A904 (C)].

Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the operator from any responsibilities, liabilities, or penalties established pursuant to any applicable State or Tribal law or regulation under authority preserved by Section 510 of the Clean Water Act.

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